U. S. DEPARTMENT OF LABOR
JAMES J. DAVIS, Secretary
BUREAU OF LABOR STATISTICS
ETHELBERT STEWART, Commissioner

MONTHLY
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SPECIAL FEATURES IN THIS ISSUE

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MONTHLY LABOR REVIEW

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Workers, Machinery, and Production in the Automobile Industry

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THE automobile industry has had a phenomenal growth, and during this expansion has made great improvement in methods of manufacture. The rise of this industry has led to numerous scientific and technical developments, many of which have been radical in character. Among these may be cited the unprecedented progress of metallurgical engineering, which is closely related to chemical engineering; the working out of the mechanical problems by mechanical engineering, and the contributions of electrical engineering in providing the modern starting and lighting systems and better methods of welding metals electrically. Hydraulic engineers have of late been given the problem of producing a reliable hydraulic brake, and besides all of these the industry has brought forth two new branches of engineering, one of which has dealt with the designing and building of automobile bodies, while the other has specialized on the problem of roads and has made possible the network of excellent highways throughout this country.

The realization of the possibilities that were early apparent as to the many and varied ways in which the automobile could become a great factor in the social and commercial world resulted in concerted efforts to attain reliability by the development of special metals, special methods, better designs, special machine tools, high-speed cutting tools, conveyor systems, inspection methods, etc. The improvement in the automobile led to increased demand, increased demand led to higher production, and higher production led to lower manufacturing costs. When one considers that approximately 15 years ago a 5-passenger car equipped with a 12-horsepower double opposed horizontal motor sold for $2,500, and that the same company, with wages more than doubled and the dollar worth about one-half what it was then, now manufactures a 5-passenger car equipped with all modern appliances and with a well-balanced 25-horsepower 6-cylinder "noiseless" motor which sells for approximately the same price, one can imagine the great changes that have made this possible.

Importance of the Industry

THE automobile industry is one of the great factors in the commerce of the world. The extent of the market for raw materials created by the automobile is probably exceeded by no other one industry. Since the fabrication of the present-day car requires a very wide range of raw materials, the automobile industry in its various ramifications affects other industries in almost every part of the world. Also, the bringing together of the raw materials and parts, and the transportation of the finished product, increase ship-

ments both by water and by rail. There are but few countries that do not furnish a part of the raw materials needed in this industry. Some of the most important materials that are used in large quantities are iron, steel, aluminum, nickel, copper, lead, tin, leather, imitation leather, cotton fabric, upholstering fabric, hair and moss for padding, asbestos, glass, lumber, petroleum, paint and varnish, rubber, and the finished products of numerous other industries.

The automobile industry led to the development of the closely allied but specialized "bodies and parts" industry. The products of the latter are used in two ways—to supply repair bodies and parts for cars already sold and to supply the automobile manufacturer with "ready to assemble" parts to be used in the manufacture or production of new cars. A few automobile manufacturers obtain all of the parts of their product from bodies and parts manufacturers.

Together these industries have enjoyed unequaled industrial growth, as is indicated by the following table. This table shows that the rank of the automobile industry, based on the "value of products," advanced from the one hundred and fiftieth place among the industries in 1899 to third place in 1919, and that the bodies and parts industry advanced from the two hundred and thirty-third place in 1904 to twenty-fifth place in 1919.[a] The figures for 1921 show that although the automobile industry suffered a decided slump, it held its rank, while the bodies and parts industry went back to thirtieth place among the leading industries. This table also shows that in the same time the average yearly earnings of the wage earner have increased more than two and a half times and that where 1.66 cars per wage earner were built in 1899, 11.15 were built in 1921.

DEVELOPMENT OF THE AUTOMOBILE INDUSTRY AND OF THE BODIES AND PARTS INDUSTRY, 1899 TO 1921[1]

Year	Number of establishments	Average number of wage earners	Amount paid to wage earners (in thousands)	Average yearly wage	Cost of materials (in thousands)	Value of products		Number of cars manufactured	
						Total (in thousands)	Rank industrially	Total	Per wage earner
	Automobile industry								
1899	57	2,241	$1,321	$589.32	$1,804	$4,748	150	3,723	1.66
1904	178	12,049	7,159	594.15	13,151	26,645	89	21,692	1.80
1909	265	51,294	33,180	646.87	107,731	193,823	29	126,570	2.47
1914	300	79,307	66,934	843.99	292,598	503,230	8	568,781	7.17
1919	315	210,559	312,166	1,482.55	1,578,652	2,387,903	3	1,888,059	8.97
1921	385	143,658	221,974	1,545.15	1,107,062	1,671,387	3	1,602,336	11.15
	Automobile bodies and parts industry								
1904	57	1,810	$980	$541.44	$1,493	$3,388	233	----------	----------
1909	478	24,427	15,513	635.09	23,914	55,379	66	----------	----------
1914	971	47,785	34,993	732.29	63,610	129,601	47	----------	----------
1919	2,515	132,556	178,956	1,350.03	362,027	692,171	25	----------	----------
1921	1,974	69,119	96,779	1,400.18	213,965	408,017	30	----------	----------

[1] Figures in this table are compiled or computed from United States Bureau of Census, Census of Manufactures.

[a] A press release of the U. S. Department of Agriculture, dated Oct. 2, 1924, shows that on July 1, 1924, 15,552,077 motor vehicles were registered in the United States, being one for every 6.6 persons.

Scope and Method of Bureau's Study

EARLY in 1924 the Bureau of Labor Statistics made a study, of which the present article is a summary, of the changes in methods and machinery in the automobile industry and in the average resultant productive capacity of the wage earner. In this article are shown as many specific examples of various improvements as possible, and the changes in the productive capacity of the wage earner which have resulted from them.

Twenty-five automobile manufacturing establishments located in Michigan, Ohio, New York, Indiana, Pennsylvania, and Wisconsin were visited and data obtained regarding actual production per man before and after the inauguration of improved methods, systems, machinery, devices, etc. Production figures from each establishment that had comparable data from year to year were obtained for as many years as available. In no instance could all data be segregated for each model manufactured by an establishment, hence so far as general production is discussed in this article consideration is given to the total number of cars manufactured without regard to the different models or types.

No data were obtained for the few establishments which purchase all the parts of their product from the bodies and parts manufacturers.

In each of the numerous shops of the various establishments, the best possible information was obtained from planning and production engineers, time-study officials, piecework records, and personal observation, and in several instances production figures were obtained directly from the machine operators. Because production figures were not available, the details of several progressive changes, some very important and others at least extremely interesting, had of necessity to be omitted.

Trend in Production

WITH due consideration for the changes that have been made in the models of cars and in the number of parts manufactured from year to year by each establishment, the trend in production time per car manufactured in the following establishments taken as samples indicates how the increased production and the increased efficiency in organization have reduced the time required for the completion of a car in different establishments. Inasmuch as the model manufactured by each establishment differs from the models manufactured by its competitors and as one establishment may purchase a far different number of ready-to-assemble parts than another, there is no basis of comparison between plants, and consequently no attempt should be made to compare the average hours of one plant with those of another.

For Establishment A data were available for each year since 1912 except 1918 and 1919, the data for which could not be segregated because of war work on other articles. The average man hours required per car are shown below for each available year:

	Man-hours per car		Man-hours per car
1912	4,664	1917	2,013
1913	4,242	1920	1,660
1914	4,199	1921	1,243
1915	3,241	1922	1,136
1916	2,375	1923	813

Due to the fact that conveyor systems were introduced into the industry in 1913 and that with the increasing efficiency of conveyors there has been a constant improvement of other manufacturing methods, the period covered by the figures above is probably that of the greatest advancement in the industry. The figures indicate the rate of change in the productive capacity of the wage earner which has resulted from the improvement of methods, machinery, etc.

Records for Establishment B were not available previous to 1916. The man-hours per car produced, for each available year, were as follows:

	Man-hours per car		Man-hours per car
1916	838	1920	596
1917	751	1921	796
1918	876	1922	528
1919	613	1923	599

The figures for this plant are interesting because they show what happens when production is lowered and the percentage of closed cars as compared to that of open cars is changed from year to year, and also the effect of changing models. Before discussing the figures, however, it should be noted that when a change of model takes place every detail is worked out previous to the beginning of actual production, and the resulting increase in time cost per car for the year in which the change is made is due mainly to the additional nonproductive hours necessary to readjust fixtures, machines, and other equipment to make them suitable to the production of the new designs and to the necessary reorganizing and systematizing that accompany such a change. In this establishment the readjustments necessary in changing the design were not such as to affect seriously the figures for the time required on the car itself.

As the model was changed in the middle of 1917, the average of 751 man-hours per car for that year applies to two models of car. The average production time for the later model, including the added time cost for making the change, was 806 hours; in 1918 the production time per car for the same model was 876 hours, due to the fact that in 1918 production fell 39 per cent from that of 1917.

Another change of model was made in 1921 and, with business at a low ebb, the production was even lower than in 1918. The result was an increase of 200 hours per car over 1920, but because of better organization, improved machinery, etc., the resulting high figure was still under that of 1918, even though conditions were more adverse.

In 1923 the average time per car was higher than in 1922, although production was almost the same. The change was due to the fact that it requires more time to build a closed car than an open car, and that in 1922 out of each 100 cars built 15 were of the closed type, while in 1923, 55 cars out of each 100 were closed.

Records for Establishment C were available since 1912 except for 1916, 1917, and 1918. The average man-hours per car built in this plant for each available year are as shown below:

	Man-hours per car		Man-hours per car
1912	1,260	1920	396
1913	966	1921	322
1914	617	1922	273
1915	533	1923	228
1919	425		

In 1912 this company was producing three models, all of different design. Beginning with 1913 it has concentrated on a single model, resulting in a decrease of approximately 300 man-hours per car. The adoption of better manufacturing methods from year to year, together with increased production, has also caused a constant decrease in the average time required to build a car.

Establishment D had records back to and including 1911. These records, however, were in such detail as to make prohibitive the work of procuring average hours per car for each year. Therefore, only a representative figure was obtained for 1911. This figure is the average production time per car for three models—a runabout equipped with a single-cylinder engine; a four-passenger roadster using an engine with two horizontal double-opposed cylinders; and a four-passenger touring car equipped with a four-cylinder vertical motor. No records were available to show how many of each model were manufactured in that year. With this wide range in models, it required an average of 625 man-hours to build each car in 1911. In 1923 the one model built by this concern was equipped with a six-cylinder motor and all up-to-date appliances and required an average of only 314 man-hours per car.

Data for years previous to 1918 were not available for Establishment E. In the statement below, however, is shown the "productive hours" per car for each year beginning with 1918:

	Productive hours per car		Productive hours per car
1918	97	1921	59
1919	66	1922	50
1920	54	1923	51

In this establishment a "productive" employee is one who actually participates in the fabrication of the product. Therefore, the above figures do not include the average hours for nonproductive employees, such as clerks, truckers, repairmen, etc., whose work does not directly contribute to the building of the component parts of the product. The average productive hours were reduced from 97 in 1918 to 51 in 1923, as is shown above, the average for 1923 being slightly higher than for 1922 because of the increased proportion of closed cars manufactured in 1923. It will be noticed also that the average productive time cost for 1921 was higher than for 1920, due mainly to a 28 per cent decrease in production resulting from business depression in 1921.

The downward trend of average man-hours required per car shown by the above examples is due to the enormous increase in production in the industry which has resulted from producing automobiles designed to meet the requirements of the business and the social world at prices consistent with the quality of the product. The enormous growth and the exigencies of war work, in turn, afforded opportunities for the conception and inauguration of many novel ideas which increased the production of the individual worker. One simple but effective innovation was that made by one establishment which employed a boy to collect mail from the various departments. The boy was furnished with roller skates and he alone now rolls throughout the factory collecting the mail that required six employees to gather before the advent of the skates.

The war-time effort to find ways to speed up production did not stop with the coming of peace, and many experiments begun at that time have borne fruit in the last three or four years. This fact is clearly demonstrated by the experience of one well-known establishment in which, in 1920, one car per day was built by each 36 men employed, whereas in 1924 one car per day was built by each 20 men employed.

Development of Industry and Effects of Improvements

THE development of efficient organization and the installation and effective use of improved machinery have accompanied the increasing demand and made possible quantity production as well as low prices. Indeed, some of the improved machinery, the product of modern engineering ingenuity, performs the almost impossible.

When automobile manufacturing began to assume large proportions it became evident that the machinery which it had inherited from the bicycle industry was fast becoming useless. The first automobiles were driven by sprocket and chain because that was a common method used on bicycles and the machinery for making those parts was already on the market. Likewise, many early automobile frames were made from tubular steel, probably because the bicycle industry had already found a process for welding with electricity the tube steel which could be used in building frames. Wire wheels were used on some of the first automobiles because quantities of wheels, as well as the machinery for building them, were obtainable from bicycle manufacturers. In 1903, however, artillery wheels of wood were adopted by many automobile builders, since the wire wheels would not stand the side strains.

The popularizing methods of the bicycle industry were also adopted. Bicycle racers became automobile racers. To win a race was at that time the best advertising any make of automobile could obtain. The car which met the test was immediately in demand by the public. Automobile racing stimulated interest in development, causing engineers to devote a great deal of study to the more scientific building of the engines. Many racing cars were developed which were equipped with four, six, and eight cylinder engines. These cars, however, did not prove satisfactory, because, sooner or later, some parts which were required to stand a great deal of shock and vibration would fracture. This brought about research for special steels to replace the carbon steel, which was about the only kind in use up to this time.

Use of the automobile for racing also caused radical changes in design. The less successful makes were forced out of the market, the more successful lasting only until surpassed by machines using newly discovered materials and principles. One improvement consisted in the opening of the inlet valve by a cam, the same as the exhaust valve; the inlet valve had heretofore been opened by suction. Air-cooled motors were the subject of extensive experimentation, but only a few survived; thermo-syphon cooling systems were adopted with the setting of the motor in a vertical position. Both the two and four cycle motors were thoroughly tried, the four-cycle type proving the more satisfactory.

Special Metals

The toughness or brittleness of steel depends mainly upon its carbon content and state of crystallization. If the molten metal is cooled slowly it crystallizes in large crystals; if rapidly, the crystals are fine. Some kinds of finely crystallized steel which have to undergo constant vibration often slowly form large crystals and will fracture just when strength is most needed. It was this change in crystallization which caused carbon steel crank shafts to break. This fault necessitated the development of new metals and better methods of crystallization.

One event which was responsible for the development of better metals and intensified efforts to attain reliability in American-made cars was a race at Palm Beach in 1905 during which a French car was wrecked. An American manufacturer picked up a piece of twisted steel from the wreck and had it analyzed. The analysis showed that the steel contained vanadium. The manufacturer tried to produce the same quality of steel in this country, but for some time met with successive failures. At last a method was discovered by which the steel could be made. This opened the way, and in a short time steel was being combined with various metals such as nickel, chromium, chrome-nickel, vanadium, etc. The resulting alloys had quite different characteristics from the steels previously used, and were soon being used wherever relative tensile strength and the ability to absorb shocks without detriment were needed.

Heat Treating

The problem of securing the finest state of crystallization in metals and a uniformity of quality has been met by the scientific development of various heat-treating methods.

Many new types of furnaces for heat treating have been designed, one of the latest of which is a furnace with a revolving table entirely inclosed except for a small opening through which the metal to be treated is placed in the oven. This furnace is so designed that the metal, upon reaching the right temperature, is quenched or cooled without exposure in any way to the outside air. Some of the old-style furnaces like the ones this replaced are still in use in the same factory. Each of these requires two men for its operation, while the new furnace requires three. However, the new furnace will produce as much treated metal as four of the old furnaces, so that, using the new type of furnace, production per man is two and two-thirds times as great as with the old type. Also the steel produced by the improved furnace is of very superior quality.

Forging

Among other problems which have presented themselves has been the action of steel under various working methods. The bicycle had developed swedging machines which were used to swedge the tubes for bicycle frames. For years automobile engineers endeavored to adapt the swedging machine to the forging of rear axle shafts and similar parts, on the principle that the more steel is forged or beaten while hot the finer the resulting grain of the steel and the

better the quality. Only recently, however, have successful results been obtained. One company has developed a new machine for forging which consists of two dies secured and projected inside of a heavy metal cylinder. In the walls of the cylinder there are 10 heavy rollers evenly spaced. When the cylinder is made to rotate, each pair of rollers in the wall forces the dies together. The machine is so constructed that the cylinder will rotate 350 times per minute. Thus a piece of steel placed between the dies is beaten at the rate of 3,500 times per minute, while if it were drop-forged probably the highest number of blows would be 150 per minute. Obviously the grain of the steel must be of better quality when forged on such a machine, and at the same time, as compared to drop-forging, the machine doubles the production per man. Besides these accomplishments the saving in steel is important. A piece of stock 28 inches long is required for the drop-forging of an axle 32 inches long, while an axle shaft the same size and length can be swedged from a piece of the stock 24 inches long.

One problem in drop forging which has demanded much attention is the forging of the cluster gear. This cluster, which is forged from a single piece of stock, is a unit in the selective sliding type of transmission. It consists of four integral gears of different sizes side by side on a common shaft. The stock from which it is forged is usually about the size of the gear known as the second-speed gear. In forging this the larger gear is upset while the smaller gears are drawn out. Thus the gears all get considerable forging except the second-speed gear. The result is that the second-speed gear is of different texture from the others, and if put under extra heavy strain it is often stripped. This unevenness of quality as between the gears is partially overcome by improved heat-treating methods.

Welding, Riveting, and Soldering

The welding of metals is of great importance and bears a close relation to forging. The art of welding has been known for many centuries and with the introduction of electric welding in 1881 it became more important than ever. The bicycle industry developed a method of electrically welding the tubes of bicycle frames. This was passed on to the early automobile manufacturers. Automobile frames made from tubes were far from satisfactory, however, and structural engineers began intense study of the requirements for the manufacture of a rigid frame. In fact, it is claimed that more thought has been spent upon the frame of the automobile than upon the steel fabrication of the skyscraper. The most satisfactory type of frame yet developed is one of pressed steel well riveted. This frame is very rigid and has stood the test through many years. A special machine has been developed for the manufacture of pressed-steel frames. This machine automatically brings together all the component parts, aligns them, and thrusts rivets through the holes and then upsets the rivets by a cold process. One man in a cab controls the whole mechanism. This machine, operated by one man, is designed to produce six frames per minute, or 3,600 in 10 hours. To accomplish this production by hand methods would require 175 men.

Many other parts of the automobile used to be riveted. During the war, however, a great deal of riveting was eliminated by the

development of spot welding. This operation is well adapted for joining sheets of thin steel or similar metal parts. It consists of bringing together two electric terminals under pressure by means of a foot treadle. The parts to be joined are placed between the terminals and wherever the terminals touch the parts they are almost instantaneously fused together. One man running a spot-welding machine can join sheet-metal parts in eight spots while a riveter would be placing one rivet. In other words, one man with the machine is equivalent to eight hand riveters and the spot-welded joint is much more secure.

Electric welding has supplanted old hand acetylene-welding methods in many places. In one establishment where the propeller tube is constructed by welding the universal joint fingers into each end of a steel tube an electrical engineer, working in conjunction with a well-known electrical manufacturer, has designed an automatic welding machine to do this work. This automatic machine does away with acetylene torches used by skilled men. It can be operated by any person capable of placing in position the parts to be welded. It is only necessary to stand by after the parts are placed and the machine is tripped, await the completion of the process, and then remove the parts. The machine itself is entirely automatic, continuing in action until the weld is properly made, at which time it automatically cuts off the current. This machine welds twice the number of parts that can be welded by skilled hand welders.

Other devices which have been designed or adapted for use in the industry have greatly increased the production of gasoline tanks. One of these machines which spins the heads onto the ends of cylindrical shaped tanks will assemble about 100 heads per man-hour, or sixteen times as many as can be fitted by hand. Another improvement in the manufacture of the tank is the substitution of a small torch, similar to an acetylene torch, which burns city gas and oxygen and is used in soldering the joints of the tanks. When soldering irons are depended upon, the average life of an iron is one week. A torch will last on an average three months. No figures were available as to the change in production resulting from the adoption of the torch alone, but the torch, more care in inspecting materials, and the elimination of the slack between operations in a period of eight years, have together changed the production from one tank per man in nine hours to 33⅓ tanks per man in the same length of time.

Better methods of soldering have also been adopted in the making of radiators. One man soldering by hand could finish two radiators per hour, while by dipping the radiators into a tank of solder he can do 40 per hour. The dipping would not have been practical during the early period of development because the parts of the radiators, such as the header or tank, into which water is poured, were made from several pieces of sheet metal with all the joints soldered together. With improved methods of pressing sheet metal, however, these headers are now pressed from one piece of metal. This made it possible to adopt better assembling methods. One man fitting the old-style header, which could not be pressed on because of the soldered joints, could do five per hour, while one man can press the new header on by machine at the rate of 38 per hour.

Small presses for crimping the material from which cellular radiator bodies are made have also been improved. In one important establishment a new press operated by one person takes the place of five old-style presses each of which required an operator. In this establishment they have increased production since 1920 from one radiator per man per day to three per man per day.

In another establishment a machine employed in making copper tubes for radiators forms the tubes from a ribbon of copper, solders the joint, and cuts them to length. This machine produces more than 3,000 per hour. For the "fin and tube" radiator for which these tubes are made, the manufacture of a large number of fins is also required. By old hand methods these were made in three operations—the stock was cut to length, punched, and the edges were turned—and a production of 2,000 per man in nine hours was reached. A machine operated by a woman now produces, per hour, 3,000 of these fins—a time saving of over 90 per cent.

Metal Preservatives

Radiators are now made which have been entirely tinned both inside and out to preserve them in sections of the country where alkali water has to be used. Other automobile parts have been protected by the use of nickel plating, tinning, and many other processes, one after another having to some extent given way to a cheaper and better process. The latest is the process of sherrardizing the parts. This process has been developed within the last three years. It is six times as cheap as nickel plating and consists of placing the parts to be treated in a horizontal cylinder in which a quantity of very fine tin dust comes in contact with the parts. The parts are heated electrically to a specified high temperature and as the cylinder slowly rotates the tin dust seems to form an alloy with the surface of the steel to a depth approximately one-sixty-fourth of an inch. Not only will this wear many times longer than nickel plating, but it can also be polished and buffed so as to give an appearance very similar to nickel plating.

Cylinder Blocks and Cam Shafts

Among other things which rapid development brought about was the designing of special machinery which would simplify the machining of the various parts. In 1903 a multiple-drill press was placed on the market. No records could be found which would show how much production was increased at that time by the use of this machine. The main purpose of the design was to drill cylinder blocks and cylinder heads. However, the savings of such a machine can well be understood by the following example of a three-spindle drill press which was recently installed in an automobile shop to supersede a single-spindle machine used to drill main bearing oil holes through the cylinder block. The single-spindle machine produced an average of 9 drilled blocks per man per hour. After the three-spindle machine was installed, the operator could drill 31 blocks per hour, including an extra 11 holes drilled in another part of the cylinder block for attaching other parts. Not only was this increase in production per man a direct result of the installation of the multiple-spindle press but the labor cost on each block was reduced 66 per cent while earning capacity remained the same.

Among other machinery put on the market at that time was a lathe with an attachment for turning cam shafts. Previous to this, cams were not a part of the shaft but were keyed on the shaft and had been made on milling machines and even earlier had been shaped by drilling the profile and finished by filing to size. The lathe for turning cams was so constructed that a correctly shaped cam would move the cutting tool of the machine and cause the cam being turned to assume the same shape. This lathe held its place for many years, but has recently given way to one equipped with 8 or 12 cams suitable for turning at one operation, in the correct relative positions to each other, all of the cams necessary on a four or six cylinder engine cam shaft. This machine is automatic and stops when the operation has reached the correct point. Not only does it perform better work than the old-style lathe but it produces 8 or 12 times as much per man and leaves no chance for even a slight error in the correct relative positions of the various cams which often resulted when made by the older methods.

The whole industry was beginning to assume a very promising aspect. Machine-tool manufacturers no longer feared spending time and money in designing special tools to be used by automobile manufacturers. Among the machine tools which were put on the market in 1905 was a cylinder grinding machine. This machine, perhaps slightly modified, is still being used in many establishments. Within the last year or two, however, it has given way in several establishments to a new machine which, instead of grinding the cylinders, hones them. This new machine is claimed to give the cylinders a better finish than the rotating grinder which has been in use for such a long period. Refinishing of the ground cylinder on the honing machine often shows up flaws in the cylinder surface which otherwise would pass undetected after grinding. Generally, both grinding and honing are not performed on the same cylinder except in case of experiment.

Unlike the grinder, the honing machine is designed with four spindles so all four cylinders can be finished simultaneously. Each spindle is equipped with four fingers, and each finger, in turn, holds a fine carborundum stone about 4 inches long. When the machine is in operation, the spindles, which are projected into the cylinders, rotate rapidly, causing the four hones on each spindle to revolve parallel to the axis of the cylinder and grind the inner surfaces of the cylinders, the spindles having an up-and-down reciprocating motion so that the entire inside surface is given an almost glassy polish. The increase in production by the use of this machine may be shown by actual production figures from two establishments after using the hone on different style cylinders. In establishment No. 1 a man could grind 21 cylinder blocks of 4 cylinders each in a day of 9 hours. After the installation of the hone one man could hone 170 blocks per day of 9 hours. In establishment No. 2 the production was somewhat different because of the difference in design, but even here approximately the same advantage was found. One man could grind 27 blocks of 4 cylinders each per day of 9 hours with the grinding machine, while with the hone he was able to hone 225 blocks per day of 9 hours.

Flywheels

During the same year in which the first cylinder grinder appeared a machine described as a "vertical turret lathe" was put on the

market. This machine was used for various kinds of work, including the turning of flywheels. In one establishment it was found that they could be roughed on this machine and finished on an engine lathe to a better advantage. By this method the employee performing the roughing cut could average approximately 30 wheels per day, varying somewhat with the design of the wheel. Then the horizontal turret lathe was introduced in the making of the flywheel. By suitable tooling this machine would complete twice the production per man, on the same style wheel, that could be obtained by the vertical machine preceding it. Perhaps the latest development is a different tooling of the turret lathe; this does not increase production, but greatly improves the quality of the work. In some factories, because of the design of the flywheel, special machines have been built, planned only to machine flywheels. Before these were installed flywheels were machined on lathes. The increase in production by using these new machines can be seen in the following actual production figures from one establishment:

Item	Before change	After change
Number of wheels produced per man per day	25	60
Number of machines necessary	12	5
Floor space required for equal production...sq. ft.	559	199

After the flywheels are machined they must be balanced, a very important operation. In the early days of the industry an arbor was pressed into the bore of the finished flywheel which was then placed in a vertical position so that each end of the arbor rested on horizontal knife edges, and if one side was heavier than the other the wheel would immediately rotate, the heavy side coming to rest at the lowest point. By this method, which is still in use in some factories, about 20 minutes were required to balance each wheel. Installation in one factory of a special machine designed for balancing flywheels resulted in a reduction of the time required per wheel from 20 minutes to an average of 2 minutes. This special machine rotates the wheel at any desired speed and shows by indicators any vibration due to unevenly distributed weight. This vibration is eliminated by the operator who adjusts different counterbalances to overcome it. He then stops the machine, brings certain points on the machine into alignment, then by reading the setting of the counterbalances and by referring to a chart at hand, he can determine the exact place where the center of overweight is located and, within a very small fraction of an ounce, how much surplus weight should be removed.

Crank Shafts

Another machine tool which appeared on the market about 1906 was a special lathe with offset arrangements on the face plates for turning crank shafts. This machine, somewhat modified, is still in use in some establishments, but has been largely replaced by new automatic lathes. Actual production figures comparing the performance of these two types of machine in the production of 150 crank shafts, in a 9-hour day, follow:

Item	Old lathes	New automatic lathes
Number of machines required	4	2
Number of operators required	4	1
Floor space required.....sq. ft.	90	18

Use of the new automatic lathes thus results in an increase of 300 per cent in production per man, a saving of 75 per cent in labor and a saving of 80 per cent in floor space.

A semiautomatic milling machine has been installed for milling the ends of the crank shaft to the proper length. This work, in one of the establishments using the automatic lathes mentioned above, required three ordinary milling machines, each taking the full attention of an operator. The new semiautomatic machine performs the work of the three old machines and requires but one operator, making a saving of labor in this operation of 66⅔ per cent.

It was not long after the introduction of the crank-shaft lathe before designers were bringing out counterbalanced crank shafts in which the counterbalances offset the weight of the connecting rod and pistons to eliminate as much vibration as possible. Many designs of counterbalanced crank shafts have been put on the market. The counterbalances on some designs are bolted to the shaft, while others have the shaft and counterbalances forged in one piece. In one of the automobile establishments where the one-piece crank shafts are made a special milling machine has been designed by which the counterbalances on the shaft are machined to insure the various counterbalances being of equal size and weight. Recently a special automatic lathe was placed alongside of the old machines. This lathe is so constructed that the various cutting tools are at all times at the proper relative angle to the irregular surface of the "counterbalance cheek," which is much the shape of a vertical section through a water bottle. Although the surfaces are of difficult shape to machine, four crank shafts were weighed after machining and showed a variation in weight of only 2½ ounces, which is less than 0.3 per cent of the total weight of a shaft. The actual effect on production is shown in the following statement comparing the daily output of the two types of machine:

Item	Number of crankshafts per day, on—	
	Milling machines	Automatic lathes
One man operating 1 machine	30	115
One man operating 2 machines	60	200

Connecting Rods

Connecting rod designs have undergone few changes, and many of the present designs are quite like the earlier ones. The main changes which have occurred have been in the material used, forged steel having been replaced in many cases by an aluminum alloy, this

being used because of its lightness. Various ways of preparing the connecting rod for the assembly have been used, some of which have affected production radically. In the plant of one well-known manufacturer, until 1920 all connecting rod bearings were scraped, and one man could scrape, on an average, 88 rods, or 22 sets, per day of 9 hours. This process was dropped when the broach machine was introduced. The broach machine for this operation uses a long cylindrical tool having many successive, circular cutting edges. Each of these edges, as it passes through the hole or babbitted bearing to be broached, cuts a very small fraction of an inch from the surface, so that when the tool has passed its entire length the hole is left very smooth and the exact specified size. This process leaves the bearing ready to assemble with only the shims to be fitted by hand. Where one man previously scraped 22 sets of rods per day, it is now possible to broach 220 sets per day. The old process of scraping and fitting required five skilled men whereas the new process of fitting shims requires but two men and comparatively little skill. In this establishment the earnings of the skilled man in this specific operation averaged 96 cents per hour. The average for fitting rods is now 85 cents per hour.

Connecting rods are usually drop-forged, the bearing cap being a part of the forging. The next step is the sawing of the cap from the rest of the rod, followed by the babbitting of each half. A certain manufacturer has, however, developed a way to babbitt this bearing before the cap is sawed off. To do this a rotating table is used which is equipped with a number of fixtures or jigs, each fixture so designed that a connecting rod placed in it is ready to have the babbitt poured into the bearing. All of the details of operations were worked out on a progressive system, which resulted in increasing production from 120 to 525 babbitted rods per man per day.

Pistons

Other machines which have recently contributed toward increasing production per man in the industry have been designed to take care of the various operations in the making of pistons. One of these is the die-cast machine for the casting of gray iron. This machine, primarily designed for the molding of carbureter bodies, has recently been equipped to produce pistons as well as intake and exhaust manifolds. Not only is this machine a labor-saving device, but it occupies very little floor space in the foundry. It eliminates the use of the mold-making machines, which vibrate more or less violently, used in connection with old hand methods of molding, and also the use of sand and sand-mixing machinery. The molds used on the die-casting machine are not made by a skilled diesinker. Each half of the mold is itself a gray iron casting so treated that the heat of the molten iron which is poured into it affects it little or not at all. When molding pistons by the old method a room 50 or 60 feet square would probably be required to produce the number of castings each day that can be produced in two hours by one of these new machines occupying a space not over 12 feet square. Under the old method a skilled molder and a helper were necessary while under the new method only laborers are required. In actual practice this machine produces an average of 900 moldings per man in 8 hours while the skilled molder and his helper can average but 200 each per day of 8 hours.

The pistons are shipped from the foundry to the automobile manufacturer. They are then turned on lathes or on special machines. After pistons are turned they are drilled and reamed for the wrist pin which fastens the connecting rod and piston together. In one shop the operation of rough drilling the wrist-pin holes was, until recently, performed upon a multiple-spindle drill press. While four pistons, held in jigs, were being drilled by the machine, the operator would place pistons in four more jigs. Thus he was able to keep the machine operating almost continuously. This machine was replaced by an automatic machine by the use of which one man can drill 335 pistons per hour, whereas using the multiple-spindle machine one man could drill only 150 pistons per hour.

The new machine is an adaption of "a machine invented for drilling nuts and the like." It is of horizontal type. When in operation, the main working parts of the machine, which are arranged cylindrically, revolve about a horizontal axis approximately once per minute. The working parts consist of two sets of horizontal drills and a drum, one set of drills being on either side of the drum. Six jigs are arranged at equal intervals around the circumference of the drum, each jig in alignment between two drills. A strong wire cable runs like a belt from a heavy idler in front of the machine up and around the drum, thus crossing each jig. The operator successively places a piston in each jig at the front of the machine and as the jig is carried up over the top of the drum the cable binds the piston tightly in place. The drill on each side, fed automatically, drills a hole through the piston in the proper place. As each jig carrying a piston comes around under the drum and up toward the front side, the drills are automatically released and withdrawn, and the piston is released at the point where the cable runs out again to the idler. The operator then removes the piston and places another in the jig.

Bodies and the Use of Sheet Metal

While all of these changes have been made in methods and machinery, there has also been a great change in design of automobile bodies and in the use of sheet metal for bodies.

The aim of the automobile manufacturer in the early days of the industry was to build a self-propelled carriage. Naturally this carriage was equipped with an ordinary wooden carriage body. The minimum finish of some early bodies consisted of six rough coats, three coats of varnish, and two coats of color varnish, requiring about 6 weeks for the finish alone. The paint on some of the large bodies weighed as much as 75 pounds. The mechanical contrivances for propelling vehicles with such bodies could easily be contained beneath the seat. It was not until the advent of the vertical four, six, and eight cylinder motors that any serious change was made in body construction. Installation of the vertical motors meant the discarding of the old-fashioned body. As early as 1903, many automobile owners had begun applying ordinary buggy tops to make the automobile serviceable in varying kinds of weather. Some owners even went so far as to build a top consisting of a wooden frame inclosed with glass. However, the body was short-lived because at that time the automobile frame upon which it was secured

was not sufficiently rigid and consequently with the poor roads in those days it was soon very badly racked. Manufacturers then turned to the use of cast aluminum panels for the body covering. These metal panels helped to make the body more rigid and capable of standing the strains to which it was subjected. Early in 1906 a few closed bodies were built by manufacturers, patterned after the designs of foreign cars, and the open bodies appeared equipped with tops. These tops were the forerunners of the present one-man tops. They were supported by top bows attached to both the front and rear seats, and were made more secure by straps which ran from the front of the top down to the front of the car. The next development of the body was the body with four doors.

Increasing demand soon caused body manufacturers to seek body material which could be obtained in large quantities, and in 1907–8 they turned to pressed steel. This created the demand for machinery by which sufficient pressed steel panels could be manufactured to satisfy the demand. Hydraulic presses were the result. They were by no means new in the steel industry, but had to be adapted to the manufacture of steel panels. They were huge machines which occupied a great deal of floor space and necessitated the installation of pumps by which hydraulic pressure was created and also the constant attention of men to run the pumps. The production in one stamping plant by means of these presses averaged 15 rear-quarter body panels per hour per man. Demand for the product exceeded the quantities that could be produced by the hydraulic press. Automobile manufacturers then turned to the toggle press, which is driven by energy stored up in the rapid rotation of a very heavy balance wheel, the inertia of which drives the press when the enormous pressure is needed. By the use of the toggle press the manufacturer was able to increase the production of rear-quarter body panels to 75 panels per man per hour. These rear-quarter panels were joined, by welding, down the center of the back of the tonneau. This operation was performed by skilled men using acetylene torches. A machine has recently been designed to increase production in joining these two panels. This machine consists of two large jigs in which the right and left body panels are rigidly secured. When the machine is tripped, the edges of the two panels become electric terminals and upon being forced against each other, are heated to a white heat which causes them to fuse. This machine is operated by an unskilled man and produces 60 welds per man per hour as against an average of 12½ for a skilled man using a torch.

In one body factory, until after the war, bodies were moved wherever needed on hand trucks equipped with 5-inch casters. In moving bodies in this manner they were being continually bumped one against another, causing scratches in the varnish, dents in the sheet metal, and other defects which had to be repaired. However, the demand for bodies became so great that ways had to be devised to eliminate this repair work. This problem was solved by scientific time study. One progressive body plant sent men in with stop watches to study all operations and to analyze the different details of each operation as it was then performed. The result of this analysis was the reorganization of the whole system with the operations coming in such sequence that the raw materials traveled the shortest possible distances in the process of conversion into the finished product. A few

conveyor systems were installed. Assembly operations were confined to the parts of the buildings nearest the windows, thus allowing the placing of drying ovens through the center of the building. This gave better ventilation as well as better light. Mercury vapor lights were installed to make available every foot of floor space which was not well lighted naturally. Automatic elevators were installed, which would take one body at a time from one floor to the next without necessitating the presence of a man. Much of the slack between operations was obliterated, and a steady flow of work was secured throughout the establishment, so that an operation on one body would be finished just in time to make way for the next body. The results of any one of these improvements could not be determined. However, the production for the establishment as a whole shows the following decided results:

Item	Before change	After change
Bodies produced each factory hour	17	50
Hours required for raw material to become body	299	83
Area required to produce 1 body per hour ..... sq. ft.	42,240	16,000

The average number of employees required remained the same.

The trimming machine is one of the improvements developed during or since the war. This machine is an adaptation of metal disks such as are found in the plumber's pipe cutter, but it is mechanically driven. The operator, assisted by a helper, starts the fender, hood, or other part to be trimmed between the disks. It is then drawn through at a moderate rate of speed and the operator skillfully guides the sheet of metal so the disks cut along the lines necessary. This machine, operated by two men, trims as many parts as 12 men could trim by the old hand methods.

Automatic Enameling

Perhaps the latest change in body building is the building of the all-metal body. The all-metal body is in such favor that demand for it may eventually reduce to some extent the use of the body with a wooden frame. The merits of the all-metal body are many. Among the most important is that of safety, giving it the same advantage that the all-steel railroad passenger car has over the wooden railroad car. Another advantage is the briefness of the period required to transform raw materials to the finished product. By the use of the metal body this period is reduced to about one-sixth of the time required for the manufacture of a wooden frame body. In one establishment, all of the metal necessary can be stamped in about two hours. Assembling requires approximately six hours, depending upon the style of the body. The assembled body is then cleaned, buffed, and prepared for enameling. The wooden frame body is not ordinarily enameled because of the high temperature necessary in the baking of enamel, while the all-metal body is placed on a special conveyor and passed through an enameling oven very similar to the oven described below. The main saving in time is apparently due to the method of putting on the body finish. Some manufacturers, however, are experimenting with en-

amel which will bake at 350° F. and are attempting with some success to bake this enamel on wooden frame bodies.

The enameling machine, as used in one establishment, consists of a series of enamel tanks and baking ovens. Two men at the head of the machine hang the parts, such as the fenders, hoods, shields, etc., on crossbars between two conveyor chains which travel at the rate of 18 inches per minute. This conveyor, carrying the parts, dips them down into a tank of enamel and then leads upward and through an oven. While the parts are being raised by the conveyor from the tank to the oven the excess enamel drips off and runs back into the tank. The first bake usually takes place at a temperature of 475° F. This process of dipping, dripping, and baking is usually done three times. The second bake takes place at 450° and the third at 425°. The cross rods of the conveyor are about 10 feet long and a foot apart and will accommodate an average of nine hoods, or four front fenders, or eight rear fenders, or a much larger number of smaller parts. The whole enameling process requires from two to four and a half hours, depending upon the number of dips and bakes necessary to give the quality of finish desired by the manufacturer. Because of the size of the parts to be enameled, only one cross rod out of every four or five in the conveyor chain can be used for the larger parts, while the smaller parts can be hung on each consecutive rod.

Real enamel will not harden by drying. It must be baked. Black is the only color used which will stand the heat of baking. Blue pigment in enamel will turn greenish above 175°; gray will turn cream color above 200°, and other pigments likewise change color if subjected to the high baking heat. Paints, often termed "enamels," containing these colors are force-dried at from 175° to 250°.

As the enameled articles are taken from the conveyor at the finishing end of the oven, an inspector looks them over and a touch-up man retouches any part or spot which may be defective. Another man known as a ding man takes out any irregularity in the surface of the sheet metal and after another inspection the parts are ready for assembly on the chassis.

The results obtained by an enameling machine depend largely upon the preparation of the parts to be enameled. They must be absolutely free from grease, dust, rust, or other foreign substance. To insure this, a large apparatus like an automatic dishwasher is used to wash them. The parts are laid on an endless chain about 4 feet wide and passed through a chamber in which streams of water containing a metal cleanser are spurted from every direction. They then pass through a second and third chamber, in each of which they are thoroughly rinsed by boiling water. A squad of men then wipe the sheet metal dry; compressed air is used to blow the moisture from the joints of the metal. The parts are then rubbed with fine emery to remove any rust, are wiped dry with a cloth, and just before being placed on the conveyor of the enamel oven are rubbed with another cloth, called a "tack rag," moistened with a certain kind of oil, to remove all dust.

The results obtained by the enameling machine are in many cases much superior to the old hand-dipping methods. Even though the results were equal as to quality, the following table shows the obvious

advantages in labor cost gained by the use of these machines if they are efficiently operated. An automatic enameling machine usually requires but 30 per cent as much labor as would be required by hand dipping for the same production.

LABOR COST OF ENAMELING SPECIFIED AUTOMOBILE PARTS BY HAND-DIPPING AND AUTOMATIC MACHINE-DIPPING METHODS

Part enameled	Labor cost	
	By hand	By automatic enameling machine
Front fender	$0.423	$0.073
Rear fender	.622	.079
Hood (complete)	1.140	.145
Hood sill	.080	.067
Splash guard	.139	.068
Engine shield	.038	.059
Clutch shield	.029	.058

The above figures for hand dipping are the actual labor costs just prior to starting production by machine, and the figures for the automatic machine are the actual cost figures after starting the regular production on the machine. The former method requires skilled employees while unskilled workers are used around the machine.

It will be noted that the engine shield and clutch shield cost more when put through the machine than when done by hand. These parts are out of sight on the finished car and are enameled to preserve them and not for appearance. Thus it matters little what kind of a finish is obtained so long as they are enameled. When done by hand no particular attention was given them; the machine, however, gives them the same high-grade finish as the hood and fenders.

A few years ago the value of a new car after being put into service was quickly diminished because the sheet-metal parts would loosen and become very noisy. The sheet-metal parts are now attached with felt strips and so designed that they seldom rattle.

Gears

Probably one of the principal factors in the production of noiseless gears was the perfecting of a machine that cuts spiral teeth on a bevel gear. The manufacture of this gear is purely a geometrical proposition mechanically performed, and if the gear is scientifically correct it will, with proper adjustment, be noiseless in action. The production of other types of gears has gone through various stages of production methods and, at present, manufacturers are depending on several of these methods, including milling, hobbing, shaping, and generating, which last is the production of gears of such design that the finished shape can be attained only by the combined motions of both the gear and the cutting tool.

The first operation performed on a gear is the turning of the blank, which is still performed on lathes in many establishments. The average production for one man running two machines in one establishment is 7½ gear blanks per hour. Some special machines have been installed, however, upon which one man operating two machines can produce 18 blanks per hour.

After the turning of the blanks, the gear teeth are usually roughed, that is, partially cut, leaving only a small amount of metal to be removed to make them of specified size. The process of roughing bevel ring gears in one establishment was performed on a special machine which cut the teeth in two gears at a time. One man could operate three of these machines, producing six gears at a time. A special machine for accomplishing this operation has been designed which consists of an octagonal drum mounted above the main mechanism of the machine. On each of the eight sides of this drum, three spindles protrude, each of which will carry a gear blank, so that the machine will accommodate 24 gear blanks at one time. The mechanical operation is automatic, the gears being "indexed" and the drum made to revolve without the direct attention of the operator. Two men can operate five of these machines, or can produce 60 gears each in approximately the same time that one man would be completing the same operation on 6 gears on the old-style machines.

Other improvements include the high-speed gear shaper, and also the high-speed gear generator, the former being used to produce straight-tooth gears and the latter mainly on the production of helical gears. These machines, which attain surface cutting speeds of from 75 to 90 feet per minute, have replaced the old-style machines in many factories which cut at the rate of about 35 feet per minute. The high-speed shaper used in one establishment for making oil gears completes the gear in one operation. The gear is approximately 1¼ by 1¼ inches. It has 14 teeth and the actual cutting time is but 58 seconds. Not only do these machines increase production immensely, but they have been designed so as to occupy but 50 per cent of the space which the old-style machines require, that is, the new machines average an increase of 100 per cent in production and occupy 50 per cent of the space, which means that out of the same factory space the manufacturer is able to get four times the production by using these new machines.

Many establishments, after having finished the cutting of the teeth on the gears, grind the surfaces to give them a glass-like finish. Some, however, accomplish the same result by burnishing which is the close meshing of the gears under pressure, causing the gear teeth surface to assume a very high polish. This polishing of the teeth is done because, when hardened, the smoother the wearing surfaces, the longer the life of the gear.

Grinding Machines

Grinding is applied to many other parts such as valve stems, wrist pins, washers, crank shafts, cam shafts, and other moving parts. This process has therefore been the subject of study with a view to improvement in method. Two improvements which have been almost universally adopted are the centerless grinder, which has more than doubled production in the grinding of simple cylindrical surfaces, and the automatic grinder, which has doubled the production of cylindrical parts which are ground internally. The virtue of the latter machine is that the machine automatically gauges the size of the hole being ground while reciprocating backward and

orward so that the moment that the internal surface has reached the pecified size an electrical attachment trips the machine and stops it. The introduction of a certain type of grinding machine, equipped ith an electromagnetic table, for grinding flat surfaces, such as camhaft thrust washers, increased production of these parts from 31 to 06 per man per hour. The production of valve stem guides has been reatly increased in one factory by slight changes in design. Two eparate changes in the design of this valve stem guide have been ade. After the first change, two men on four machines were proucing the same number per man as five men operating eight mahines before the change. After the second change, one man on two achines is accomplishing the same production. Thus, since the last hange, production per man equals that of five men before the esign was altered.

Screw Machines

Large numbers of smaller parts which are used in the manufacture f automobiles are produced on screw machines. In many cases, crew machines have accomplished a change which reaches a ratio of ,000 to 1 as compared with production by the now obsolete methods. n the production of one kind of small screws one machine will turn, hread, finish, and cut the slots in 1,150 screws per hour. One man an run from three to six of these screw machines, the number of machines depending upon the size of the screw or part which is being machined.

Precision Instruments

In order to assure accuracy in the production of parts, very fine precision instruments have been perfected, which show the slightest variation from the correct shape or size of the product. The shape of a gear tooth can be projected by means of a special projection lantern upon a chart which has the correct shape drawn upon it, thus showing, by comparison, any deviation from the perfect line which may exist in the product, and making it possible to correct the slightest error.

Other machines, known as amplifiers, are in use also. Some of these amplifiers will detect variations of one twenty-thousandth of an inch. By the use of these instruments, gauges which have heretofore been considered "perfect" are shown to have variable surfaces.

The surfaces of all wearing parts are made as smooth as possible and are checked regularly by these machines. The best finish is obtained by grinding. The grinding wheels are dressed very often to insure the best possible work. Diamonds set in holders are used for this purpose. The problem of setting them so they will stand the strains caused by cutting away the hard carborundum is given constant attention.

Speeding-Up Measures

For many years the general practice has been to set the diamonds in copper because it is soft enough to be peened easily and yet tough enough to hold the jewel firmly. Some manufacturers have turned to new practice, however, by placing the diamond in a mold and casting a metal around it. In one factory where considerable grinding is done, the entire time of one man and an assistant was required to

keep enough diamonds set to supply the grinding-machine operators with dressers, when they were set in copper. Under the new method of pouring molten "Lynite," a well-known commercial alloy, into a mold in which the diamond had been placed, it was found that one man alone could set sufficient diamonds to supply the demand. Before the change, an average of three diamonds per hour per man, or six for the two men, was obtained, while after the change the one employee alone could average more than seven diamonds per hour. Similar efforts to speed up to meet increased demand have been made throughout the entire industry.

Timing-gear covers for one car were made from cast iron, but because of increased demand, limited equipment, and the fact that cast aluminum could be machined much faster, the specifications were changed to call for aluminum. As a result the labor cost was reduced one-third and the production was nearly doubled. In a short time, however, the change to aluminum, because of its high first cost, caused the engineers to study the problem of reducing the cost of this part which had so perceptibly risen upon the adoption of aluminum. They concluded that, if it were possible to maintain a high speed on cast iron, the problem would be satisfactorily solved. They tried various experiments, and finally, by using cutting tools made from a high-speed tool steel, commercially known as "stellite," which will endure higher cutting speeds than other high-speed steels when used in cutting cast iron, the experiment resulted in the return to cast iron. The production obtained by the use of the different materials is shown in the following statement. In each case the figures are for the same operations.

Kind of cover	Production per man per hour	Rate per piece
Cast-iron	16	$0.042
Aluminum	28	.028
Cast-iron, machined with "stellite"	23	.035

Comparing the original production of cast-iron covers with the production obtained by the new tool, the above figures show a reduction in labor cost per piece of nearly 17 per cent, and an increase in production per man of 44 per cent. At the same time it meant a 19 per cent increase in the employee's earnings.

As fast as engineers can find possibilities for speeding up, some new scheme is devised and put in operation. In one large establishment in the final assembling, the conveyor is provided with several switches, any one of which will stop the motor driving the conveyor. This is necessary, as circumstances often develop which necessitate the halting of the work. This means, of course, the interrupting of the work of hundreds of men. It was found that often the motor was stopped when it was not absolutely necessary. As a result, clocks were installed at each switch and every man authorized to stop the motor was given a key. This system of timing the man who pulled the switch caused an increase in production and prevented many unnecessary interruptions in the work.

Incentives.—The effect of incentives for speeding up the individual can not be ignored. Among the most ordinary incentives for increased production by the individual employee are production bonuses, piecework, profit sharing, wage-payment systems, etc. Piecework and bonus systems are the incentives most commonly used in the automobile industry. A few examples of the increases in production resulting from their adoption are shown below.

In one large factory where piece rates were paid, the scheme was tried of guaranteeing the rates for a period of 12 months, the prevailing rates to stand for that period unless there was a mechanical change. At the same time the foreman of each department was furnished with the "cost per piece" for the day before and with other information concerning the efficiency of his department. At the end of 12 months if there was no perceptible change in the cost of living as evidenced by State and Federal figures the rates were again guaranteed for 12 months, and if a change had occurred the rates were revised. The result was that the wage earner in this factory could see no limit to his earning capacity as long as there was work to be done. He became a thinking individual instead of a part of a large machine, becoming more and more interested in progressive ways, finding for himself ways by which he could do his work easier and faster without the fear of having the rates lowered. The production of many departments in this factory has been doubled, and the employees, in many instances, have actually been able to double their earning capacity without much increase of effort.

In another establishment in 1920 a production of 100 motors per day was averaged. In order to make the repairs on them after they had been tested, nine men were necessary. This work was paid for on a straight day-rate basis. Early in 1921 a certain allowance was made for tearing down the tested motor for any necessary adjustments or repairs, and the actual changing was put on a piecework basis. About the same time the factory production was increased from 100 to 200 motors per day. The effect of the piecework system on this department speeded up the repairs so that four men could do the work on all motors requiring repairs even after the production was doubled; in other words, four men did the work which formerly would have required 18 men.

Another establishment had been operating on what is known as "group piecework" system. This is the application of the piece rate to the production of a group of men instead of to that of the individual, where the work of the group is all related to the production of some particular part or group of operations. The management tried the experiment of putting the work on a piece rate system with each man for himself, and found that it increased production from 300 to 360 units per day, whereupon the individual system was adopted throughout the plant in place of the group system.

Probably the most commonly used incentive in the automobile industry, however, is the "group bonus." This is a system applied to a team or group of workmen or to a whole division working in common on the production of some specific part. The feature of this incentive is a variable bonus paid, in addition to the regular guaranteed hourly rates, when the actual production of a team, group, or division exceeds a standard performance. This standard is the predetermined time required for an average good workman to

complete the job. The degree of efficiency of the group is shown by dividing the standard time by the actual time taken to complete the job. A bonus, ranging from 1 per cent of earnings at regular hourly rates when 75 per cent efficiency is attained to 140 per cent when 200 per cent efficiency is attained, is paid in addition to the earnings at regular hourly rates. With the regular hourly rates remaining constant, the bonus range is so devised that the labor cost per unit remains the same regardless of the degree of efficiency attained and the consequent higher average hourly earnings.

The average earnings for two weeks previous to the installation of this system in one establishment were 86 cents per hour for one department. Several weeks later, when the system was perfected, the average earnings were 99 cents per hour for the same department, and the labor cost per unit was reduced.

Even though this system is complicated, many advantages have been secured through its adoption, in addition to increased production and constant labor cost. Some of the advantages are that it reduces the clerical force by simplifying the timekeeping and payroll routine; it secures a definite rating for each group or division for comparative purposes; it reduces scrap and defective work because each group is paid for the number of units accepted by the inspector; and it reduces the inventory to a minimum because the sequence of operations in each group must be so worked out that the work "flows" evenly and can be inspected as soon as all operations are completed. Thus, an accurate count of production is secured and the piling up of the stock between workmen which obtained before the installation of the system, and to some extent permitted "padding" of the count of "number of pieces," is prevented. Since each man shares equally in the production for the group, and each in a way becomes responsible for and to the other members of the group, undesirable employees are soon eliminated. Also, each man is given an opportunity to take advantage of any idle time, because the members of the group can interchange operations or assist each other without losing time by reporting to the foreman or the timekeeper and without causing complications by having to change job tickets. Under this system the number of men in a group or division can be increased or reduced by mutual consent, so long as the specified production is obtained.

Other labor-saving devices.—Speeding-up has been accomplished in some factories through the medium of labor-saving devices which primarily reduce the necessity of unproductive labor. Probably the most general outstanding results in labor saving have been obtained by the introduction of gasoline and electrically driven trucks. Ordinarily, an electric truck operated by one man can accomplish as much as four men using hand trucks, and in one establishment where 70 truckers were employed the work is now being done by 14 electric-truck operators.

The overhead crane is also an important labor-saving device. One establishment until recently sold the steel chips from the machine shop, shipping them in open coal cars. Before the installation of the crane, two men loaded a car of this scrap in 17½ hours. After the installation of the crane, which was equipped with an electromagnet, two men could load the car in 2 hours, making a labor saving of nearly 89 per cent. In another establishment, one

man using lift trucks and a crane takes all of the steel chips and scrap out of the machine shop, work which formerly required 16 men using hand trucks; this was a labor saving of 94 per cent.

Another important labor-saving device is the paint-spraying machine. This sort of machine was first used to whitewash the buildings of the World Exposition in Chicago. It is now very largely used in the automobile industry in the paint department. A man operating a paint sprayer can do the work which would require seven men using the hand method.

In a certain stamping plant where parts for steel automobile frames are produced, and where the production runs into a high figure, conveyor systems have been installed which do the work that would require the services of 140 truckers. Not only are the truckers now unnecessary, but the production of the plant as a whole has been increased. Another conveyor system, which was installed in a large factory for the purpose of carrying parts from the forge and receiving departments to the machine shop, replaced 70 truckers who had previously been employed to do this work. This does not mean that these workers have been dismissed, however. It is usually customary when nonproductive workers are no longer necessary, due to improved devices, to change their occupation so far as possible to one of a productive nature.

Such labor-saving devices also permit the organization to adopt better manufacturing systems, as shown in one establishment in which a conveyor system was installed in the trimming department. Before the installation of this conveyor system, the bodies to be trimmed were trucked by hand into the trimming room and placed on two horses where two skilled trimmers working together would trim the body completely. In moving them about, the bodies were often dented or scratched, necessitating the services of a ding man to hammer out the dents in the sheet metal and the return of many bodies to the paint shop to have the scratched places retouched.

Under the above conditions, 54 men working in 27 teams would trim 14 bodies per hour. A conveyor system was installed in this department and scientific time study was made of all of the various operations necessary in trimming the bodies, the operations being carefully grouped and put on a progressive basis, with the conveyor moving all the time. As a result 23 men, each an expert on one group of operations, now produce in the same length of time as many trimmed bodies as 54 men previously produced. The product is also of a higher grade. The average production per man has increased from 2.31 to 5.43 trimmed bodies per day, and earnings per man have been increased more than 93 per cent, while the labor cost to the manufacturer has been reduced approximately 14 per cent.

Labor-saving devices often effect savings in ways other than by reducing labor. In one large factory, the stock was moved about on trucks equipped with 5-inch casters, and often in pushing heavily loaded trucks employees slipped and injured themselves. Gravity roller systems were installed which require little effort to move the stock because of the ease with which material can be moved on the ball-bearing rollers. The installation of these roller conveyors eliminated the piling up of large amounts of stock between operations and gave an average reduction of inventory of 75 per cent for the departments in which they were installed.

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Rerouting of Materials

To train, in such skilled trades as would be necessary, a sufficient number of men to build automobiles in quantities that would supply the demand would, under the old methods, have been impossible. It was this necessity for getting the greatest results possible from skilled men that has brought about much of the improvement and change in factory organization. One new system that has been almost universally adopted is the rearrangement of machinery for the progressive manufacture of the various parts. Instead of stock being carried from one department to another to have the different operations performed, the different kinds of machinery have been moved and arranged according to the sequence of operations, so when an operation is finished by one machine the machine next to it is the right one to perform the succeeding operation. Such changes have eliminated an enormous amount of wasted effort. In a certain establishment it was estimated that some materials, trucked from department to department, traveled 3½ miles. A change made in 1923 within a period of six months has reduced this travel to approximately 50 feet.

With the adoption of similar changes and of modern machinery such as has been described in this article the average wage earner with latent ability but no training is employed and taught some one operation, and in the repeated performance of that operation he becomes expert. Employers assert that this does not remove the necessity for ability but encourages expert specialization in the individual, whose suggestions often have resulted in the successful development of many of the machines.

Present Status of Old-Age Pension Legislation in the United States

By A. Epstein

LIKE many of our social and labor measures in the United States, the movement for old-age pension legislation is going through the pangs of court nullifications and constitutional surgical operations. The recent decision of the Dauphin County (Pa.), court declaring the Pennsylvania old-age assistance act unconstitutional will, no doubt, affect greatly the recent attempt in many of our States to expedite our sluggishness in constructive legislation for the aged by the enactment of old-age pension bills. Although in England legislative committees were seeking a solution of the problem of old age as early as the beginning of the nineteenth century, and on the European continent adequate provision for the aged was a dominating issue throughout the latter half of the last century, in the United States the first legislative inquiry into the condition of the aged did not come until 1907, when the Massachusetts Legislature appointed a commission to study the question. Almost eight years elapsed before another American State—Wisconsin—gave some attention to the subject. In 1917, California, Illinois, New Jersey, Pennsylvania, and Ohio followed by appointing commissions to investigate the subject. The two last-named commissions submitted extensive reports on the problem and drafted bills

which were introduced in their respective legislatures. These, however, made little headway. The few bills introduced in Congress by Representatives Wilson, Berger, Kelly, Sherwood, and Senator McNary never saw light outside the committee rooms. As we were recovering from the war a lull in this legislation naturally followed. For a while it seemed, indeed, that legislative solution of the problem of old-age dependency in this country was so distant as to be almost a Utopian ideal. Suddenly, however, during the year 1923 old-age pension bills were introduced in 24 legislatures. The end of the legislative year saw such bills reported favorably by their committees in 12 States, passing one house of the legislature in six States, and being enacted into law in three States.

While 1923 thus marks the "year 1" in old-age pension legislation in the United States, the surprising thing to the student is that the subject had been neglected up to that time, for, with the exception of the Massachusetts commission, which submitted divided recommendations to the Bay State legislature, all the State commissions which have investigated the subject have been unanimous in their condemnation of the antiquated poorhouse system and in urging a more constructive social plan of action. The findings of these commissions were indeed startling, and while at first it seemed that they were without effective results, the recent national activity in behalf of the aged warrants optimism that, given sufficient time, careful sowing of facts will bear fruit.

Need for Old-Age Pension Legislation

THE difficulties facing the more than 4,000,000 persons 65 years of age and over in the United States—constituting a population outnumbering the inhabitants of our country during the Revolution—could not, of course, be ignored very long. The investigations of the official commissions have shed too much light upon the problems of superannuated wage earners to be disregarded. These disclosures revealed that the causes of dependency in old age are not individual, not necessarily the result of any lack of industry or of the inclination to be thrifty, but that they were social and due mainly to circumstances over which the individual has little control. The modern problem of superannuation, it was shown, is largely the result of our highly developed industrial system. It is economic senility—the inability to remain in industry after a certain age has been attained—which constitutes our present problem of destitution of the aged. That while in earlier stages of society old age was looked forward to with a certain feeling of satisfaction and accomplishment, our modern wage system has made old age stand out as a menacing deadly specter to be dreaded by all. At present, although most men and women are dependent upon their daily toil for their daily bread, few persons can play any part in modern industry after they have passed three score years of age. At an age when workmen in agricultural pursuits were considered to be in their prime the industrial laborer is found to have become worn out and old. Thousands of such worn-out aged workers find themselves without friends or relatives to help or care for them. With each new invention and the introduction of each new machine, the old mechanic's experience is becoming of less and less value. These reports have shown conclusively that among the

leading causes of dependency in old age are the lack of family connections and impaired physical condition. Of the paupers throughout the United States in 1910, 50.2 per cent were never married and 32.5 per cent were widowed. As to the physical condition of aged dependents, the Massachusetts commission found among almshouse inmates 93.8 per cent defective. The Ohio commission estimated that more than 75 per cent of the inmates of county infirmaries were "old and infirm." The Pennsylvania commission found only 12.8 per cent in these institutions in "good or fair health."

The precarious economic status of wage earners was also revealed by these investigations. In Hamilton, Ohio, 36.5 per cent of the aged persons investigated owned their homes free of debt, while in Cincinnati only 23.6 per cent owned such homes. In Pennsylvania 38 per cent of those past 50 years of age were found to have property possessions of one kind or another. That these few possessed remarkable fortitude is evident from the low wages they were earning. According to the disclosures of the Pennsylvania commission the earnings of the aged during the high-wage period of 1918 were as follows: 29 per cent earned from $14 to $20 per week; 14 per cent earned less than $12 per week; while 37 per cent were not earning anything.

Our superannuated wage earners are not relieved to any considerable extent by the existing pensions provided for this purpose by industrial concerns and railroads, States and municipalities, or fraternal associations and trade-unions. The pension systems of industrial concerns—of which there were only 142 in 1920—even if they were adequate, are open to many abuses. Organized labor is generally opposed to establishment funds, claiming that they are formed largely for the purpose of lessening the attractiveness of labor unions. At best, the number of aged wage earners taken care of by industrial pensions is negligible. The 20 leading Pennsylvania concerns which have established regular systems of pensions had on their lists in 1918 only 2,139 persons. From 1884 to 1920, a period of 36 years, the Baltimore & Ohio Railroad retired on pensions only 2,759 of its employees. The inadequate provisions of our State, municipal, and teachers' pension funds are generally known. Of the nearly 100 teachers' retirement funds only a few, according to reliable authorities, can escape utter collapse. The recent Sterling-Lehlbach act passed by Congress has improved the situation somewhat as far as Federal employees are concerned. Fraternal and trade-union organizations provide for only a few aged workers. In Pennsylvania the total number of pensioners of all classes (outside of those receiving United States pensions) did not exceed 3 per cent of the persons 65 years of age and over.

The State reports also disclosed that although practically everywhere some adequate plan to take care of worn-out aged toilers has been devised, and though approximately one out of every three persons reaching the age of 65 years becomes dependent either upon charity or relatives, the poorhouse still remains the only place of refuge for the great majority of the destitute in the United States, and this in spite of the fact that the poor laws in our States are practically modeled after the old British poor-law system, which England has since modified greatly. Indeed, many of our State laws are still almost identical with the Elizabethan poor law of 1601. Our poorhouses are "catch-all" institutions. Rarely are there strict regula-

tions as to admissions and discharges of inmates. There is always a heterogeneous collection in these institutions, the inmates including the young and the old, the feeble-minded and epileptics, prostitutes and abandoned babes, inebriates and worn-out toilers. They are the "homes" of both the veterans of labor and the "veterans of dissipation."

Present Provision for Poor Relief

THE confusion generally prevailing in our methods of poor relief is best illustrated by the situation in Pennsylvania. According to the Pennsylvania Commission on Old Age Pensions there are no specific general laws in that State dealing with the poor. There are at present, it is generally estimated, from 1,200 to over 3,000 acts of assembly relating to the poor. There has been no revision of the laws of Pennsylvania dealing with poor relief since 1836. The poor laws are administered in a variety of ways. Some counties select a separate board of directors of the poor, made up of from three to eight members. In others, the county commissioners act also as poor directors. There are counties in the Keystone State where the township-unit system is practiced—each township or borough providing for its own poor—while a few counties practice varying phases of the three systems at the same time.

The commissions which have been studying the subject are unanimous that our poorhouses are inadequate, antiquated, and exceedingly costly, considering the returns. The prospect of the poorhouse at the end of a life of toil haunts the wage earner like a dark shadow and saps his vitality. Only in rare instances do the almshouses provide real care for the sick. One sees no happy faces in our almshouses. In almost no place is there provision made for recreation and entertainment and for the maintenance of interest among the inmates in order to keep them from brooding. The inmates are given mostly coarse and unpalatable food, although the overseers themselves manage to fare somewhat better. This was shown conspicuously in a study conducted by the writer for the Pennsylvania Commission on Old Age Pensions. Some of the annual food rations provided for inmates and the supervisors in one county almshouse were as follows:

FOOD RATIONS PROVIDED ANNUALLY FOR THE INMATES AND THE SUPERVISORS OF A COUNTY ALMSHOUSE IN PENNSYLVANIA

Articles of food	Per inmate	Per steward
Butter	7½ pounds	30 pounds.
Eggs	38	200.
Chicken	1 ounce	10 pounds.
Milk	23 quarts	101 quarts.

Efforts Toward Old-Age Pension Legislation

THESE facts were, of course, too glaring to be ignored. Aware of the difficulties to be encountered by Federal legislation, labor organizations and fraternal societies began active campaigns in behalf of State-wide old-age pension movements. The American Federation of Labor, as well as many international labor unions and

State federations of labor, repeatedly adopted resolutions urging the enactment of such laws. The United Mine Workers of America appointed a committee to work in behalf of such laws in all the mining States, as a result of which bills for this purpose were introduced in 10 States in 1921. Finally, the Fraternal Order of Eagles appointed a national committee, which began an active campaign for old-age pension laws throughout the country. A standard bill, based largely upon the one drafted by the Pennsylvania Old Age Pension Commission, which also received the approval of the American Association for Labor Legislation, was prepared and in 1923 was introduced in States of Maine, Massachusetts, Connecticut, Rhode Island, New York, New Jersey, Pennsylvania, Ohio, Indiana, Michigan, Illinois, Wisconsin, Minnesota, Kansas, Colorado, Idaho, Nebraska, Wyoming, Montana, Utah, Nevada, Washington, California, and Texas. The end of the legislative year witnessed the creation of commissions to study the subject further in Massachusetts and Indiana, bills passing one house of the legislature in the States of Maine, Massachusetts, New Jersey, Illinois, Wisconsin, and Texas; and enactment of bills into laws in Pennsylvania, Nevada, and Montana. So far, it is only in the last-named State that payments have been made.

Provisions of Laws Already Passed

THE American laws follow the English plan of granting straight government annuities to aged citizens who qualify under the law. This involves, first, the recognition that, in one form or another, the support of the dependent aged must fall on the community and it might as well be done constructively; second, that the contributions of the farmers and industrial workers to the country are just as vital to the welfare of the Nation as those of policemen and firemen, soldiers, judges, etc., whose rights to old-age pensions have long been recognized; and third, that the citizen who has lived in the State 15 or more years, has, by his years of labor, citizenship, and taxes paid, made sufficient contributions to the common weal to entitle him to some measure of comfort during the days when he is no longer able to compete in the industrial struggle. Both the Pennsylvania and Montana laws provide for the payment of pensions to all men and women who have attained the age of 70 or upward and who have been residents of the respective States for 15 years continuously before the application for pension was made. In Nevada the pensionable age is set at 60, while the State residence required is but 10 years. The Pennsylvania and Nevada laws provide that the amount of the pension "shall be fixed with due regard to the conditions in each case, but in no case shall it be an amount which, when added to the income of the applicant from all other sources, shall exceed a total of $1 a day." In Montana the maximum amount of the pension is limited to $25 a month. In Pennsylvania the funds for the payment of old-age pensions are furnished entirely by the State; in Montana the pension funds come from the respective counties; while the Nevada law provides for the raising of the pension fund by a special levy of 2½ mills on each $100 of taxable property.

Opposition and Its Results

THE ever-present forces which combat all progressive legislation were caught unawares by the crystallized sentiment toward these measures and their unexpected impetus. It was not to be expected, however, that these laws would for long meet with no opposition. An eleventh-hour attempt to stop the passage of these bills failed to influence the legislatures of Pennsylvania, Nevada, and Montana. The opposition found its first opportunity to show its strength in Ohio where the old-age pension proposition, against the advice of students of the question, was submitted last fall to a referendum of the people. Despite the valiant efforts of the proponents of the measure, the odds were all against them. The friends of this referendum were poorly organized and almost divided in their councils; and Ohio was, as yet, not prepared for an intelligent and impartial discussion of the subject. The State was flooded with opposition literature and practically every newspaper was against the measure. As a result the proposed law was defeated at the polls by a considerable majority.

The Pennsylvania Legislature appropriated only $25,000 for the work of the commission, and specifically requested it to inaugurate the machinery and to endeavor to gather additional data in regard to the effect and cost of the measure; furthermore, with the pittance appropriated, but few pensions could have been granted at best. But Governor Pinchot had appointed on the commission the same men and women who brought in the report and who drafted the original bill; moreover, the commission actually set out to organize the State and to collect data which would give a comprehensive idea of the entire problem.

Unhappily for the friends of this legislation, section 18 of Article III of the Pennsylvania Constitution, like that of only two other State constitutions, provides that: "No appropriations, except for pensions or gratuities for military services, shall be made for charitable, educational, or benevolent purposes, to any person or community, nor to any denominational or sectarian institution, corporation, or association." On the basis of this provision a few taxpayers filed a complaint in the Dauphin County court praying for an injunction to restrain the State commission and the fiscal officers of the State from "making disbursements involving the Commonwealth of Pennsylvania in great expense to the irreparable injury of ourselves and other taxpayers."

The complainants argued that, in addition to violating the above constitutional provision, the law grants the commission arbitrary powers in making grants; that it is discriminatory in its age limit and other qualifications, and therefore violates the fourteenth amendment of the Constitution of the United States which prohibits any State from denying to any person within its jurisdiction the equal protection of the laws. The complainants also charged, without presenting any reasonable or scientific method of computation, that "the minimum annual cost of the old-age pension system will be approximately $25,000,000 per annum," and this regardless of the fact that, so far, the State commission's estimates range far below $5,000,000 per year.

At the hearing before the judges, and in his extensive brief, the attorney for the complainants attacked the law as "bordering on a new form of outrageous socialism;" characterized it as "grotesque, full of absurdities, and a 'jig-saw' puzzle," and argued that this act is "a distinct step toward centralization and toward making thirftlessness and laziness genteel." It is the menacing specter of the poorhouse over the hill, declared the attorney for the complainants, that is responsible for all our efforts and ambition. Remove that dreaded apparition, and what becomes of our civilization? The State's attorney general, defending the act, argued that the constitutional restrictions regarding benevolent appropriations, as shown conclusively throughout the debates at the constitutional convention, were not intended for such purposes, but were inserted for the purpose of preventing the steady flow of calamity bills which were prevalent at that period. As to the wisdom and merits of the law, the State contended that is not for the court to pass upon, being solely the prerogative of the legislative branch.

On August 4, 1924, the Dauphin County court rendered a decision declaring the Pennsylvania old-age assistance act unconstitutional. In this opinion, Presiding Justice Willlam M. Hargest, declared:

> Whether or not this legislation is beneficial or whether it is paternalism and a vicious usurpation by the Government of a quasi-fatherly relation to the citizen and his family * * * can not concern us. Our single inquiry must be whether it is prohibited by the constitution itself. It is with these principles in mind that we approach the consideration of this question.
>
> The question before us is whether the old-age assistance provided by this statute involves an appropriation for charitable or benevolent purposes and whether the prohibition "to any person" includes a prohibition to a class of persons through the agency of a commission.

After finding the act allowing "benevolence to a person," the court states further:

> Pennsylvania has recognized its inherent duty to care for its poor. Its system had been in operation many years when the constitution of 1874 was framed. That system provided for poor districts, poor directors, and overseers and for the relief of paupers as a matter of local concern. Those who framed the constitution understood it, and no word is contained in the constitution with reference to it. The system was left untouched. If there had been any purpose to change that system, some word indicating that purpose would have been found in the consitution. If it had been intended that direct appropriations might be made out of the State treasury for the relief of the poor, some provision evidencing such intention, which would create so radical a change in the governmental policy in this regard, would have been inserted in the constitution. The conclusion is therefore irresistible that a direct appropriation from the State treasury to any person or class of persons can not be sustained on the theory that it is a discharge of the inherent obligation of the State to take care of its paupers.

This drastic decision affects not only the Pennsylvania mothers' assistance fund, which is based on the same principles and which has been in successful operation for about eight years, but, it is believed, also undermines the State's recent employees' retirement system, as well as the teachers' and judges' retirement funds. An appeal from the lower court's decision is now being taken to the Pennsylvania Supreme Court. Unless the latter body reverses the decision of the lower court, an amendment to the State constitution will be the only solution.

Conclusion

WHILE this decision shatters the hope for immediate relief entertained by many thousands of aged men and women in the State since the passage of the act, it has not been without benefit. For one thing, it has disclosed that Pennsylvania is determined to substitute for its antiquated poor-law system a more humane and adequate old-age pension plan. This has been forcefully brought out by the almost unanimous editorial disapproval of Pennsylvania newspapers of the court's decision and by their urging of an immediate constitutional revision. It is most significant in this respect that one of the two newspapers in the State which first indicated its approval of the decision of the court, because of objections to the law, reversed its position a few days later by urging a constitutional amendment which would permit of this legislation.

PRICES AND COST OF LIVING

Retail Prices of Food in the United States

THE following tables are based on figures which have been received by the Bureau of Labor Statistics from retail dealers through monthly reports of actual selling prices.[1]

Table 1 shows for the United States retail prices of food for August 15, 1923, and July 15 and August 15, 1924, as well as the percentage changes in the year and in the month. For example, the price per pound of flour was 4.5 cents in August, 1923, 4.8 cents in July, 1924, and 5.1 cents in August, 1924. These figures show an increase of 13 per cent in the year, and 6 per cent in the month.

The cost of the various articles of food[2] combined shows a decrease of 1.5 per cent August, 1924, as compared with August, 1923, and an increase of six-tenths of 1 per cent August, 1924, as compared with July, 1924.

TABLE 1.—AVERAGE RETAIL PRICES OF SPECIFIED FOOD ARTICLES AND PER CENT OF INCREASE OR DECREASE AUGUST 15, 1924, COMPARED WITH AUGUST 15, 1923, AND JULY 15, 1924

[Percentage changes of five-tenths of 1 per cent and over are given in whole numbers]

Article	Unit	Average retail price on—			Per cent of increase (+) or decrease (−) Aug. 15, 1924, compared with—	
		Aug. 15, 1923	July 15, 1924	Aug. 15, 1924	Aug. 15, 1923	July 15, 1924
		Cents	*Cents*	*Cents*		
Sirloin steak	Pound	41.1	40.7	40.7	−1	0
Round steak	do	35.5	34.7	34.8	−2	+0.3
Rib roast	do	29.2	29.1	29.1	−0.3	0
Chuck roast	do	20.8	21.0	21.0	+1	0
Plate beef	do	12.7	13.1	13.1	+3	0
Pork chops	do	32.1	30.3	34.8	+8	+15
Bacon	do	39.2	36.4	38.3	−2	+5
Ham	do	46.3	44.7	46.6	+1	+4
Lamb, leg of	do	37.2	38.4	37.3	+0.3	−3
Hens	do	34.5	35.2	34.8	+1	−1
Salmon, canned, red	do	31.2	31.2	31.2	0	0
Milk, fresh	Quart	13.7	13.5	13.7	0	+1
Milk, evaporated	15–16 oz. can	12.2	11.2	11.1	−9	−1
Butter	Pound	51.8	49.4	48.3	−7	−2
Oleomargarine	do	29.2	30.0	30.5	+4	+2
Nut margarine	do	27.6	28.4	28.8	+4	+1
Cheese	do	36.3	34.4	34.4	−5	0
Lard	do	17.1	17.1	19.3	+13	+13
Vegetable lard substitute	do	22.8	24.7	25.1	+10	+2
Eggs, strictly fresh	Dozen	41.5	39.4	44.6	+7	+13
Bread	Pound	8.7	8.7	8.8	+1	+1
Flour	do	4.5	4.8	5.1	+13	+6
Corn meal	do	4.1	4.5	4.7	+15	+4
Rolled oats	do	8.8	8.8	8.8	0	0

[1] In addition to monthly retail prices of food and coal, the bureau secures prices of gas and electricity from each of 51 cities. These prices are published at quarterly intervals in the MONTHLY LABOR REVIEW. Retail prices of dry goods were published quarterly until November, 1923.

[2] The following 22 articles, weighted according to the consumption of the average family, have been used from January, 1913, to December, 1920: Sirloin steak, round steak, rib roast, chuck roast, plate beef, pork chops, bacon, ham, lard, hens, flour, corn meal, eggs, butter, milk, bread, potatoes, sugar, cheese, rice, coffee, and tea. The remainder of the 43 articles, shown in Tables 1 and 2, have been included in the weighted aggregates for each month beginning with January, 1921.

TABLE 1.—AVERAGE RETAIL PRICES OF SPECIFIED FOOD ARTICLES AND PER CENT OF INCREASE OR DECREASE AUGUST 15, 1924, COMPARED WITH AUGUST 15, 1923, AND JULY 15, 1924—Concluded

Article	Unit	Average retail price on—			Per cent of increase (+) or decrease (−) Aug. 15, 1924, compared with—	
		Aug. 15, 1923	July 15, 1924	Aug. 15, 1924	Aug. 15, 1923	July 15, 1924
		Cents	*Cents*	*Cents*		
Corn flakes	8-oz. pkg.	9.7	9.6	9.7	0	+1
Wheat cereal	28-oz. pkg.	24.4	24.3	24.3	−0.4	0
Macaroni	Pound	19.8	19.6	19.6	−1	0
Rice	do	9.4	10.0	10.2	+9	+2
Beans, navy	do	11.0	9.7	9.7	−12	0
Potatoes	do	3.7	3.3	2.6	−30	−21
Onions	do	6.5	6.9	6.5	0	−6
Cabbage	do	4.8	5.0	4.3	−10	−14
Beans, baked	No. 2 can	12.9	12.6	12.6	−2	0
Corn, canned	do	15.4	15.8	15.8	+3	0
Peas, canned	do	17.6	18.1	18.2	+3	+1
Tomatoes, canned	do	13.0	13.2	13.3	+2	+1
Sugar, granulated	Pound	9.6	8.4	8.2	−15	−2
Tea	do	69.7	70.8	70.9	+2	+0.1
Coffee	do	37.6	42.3	43.4	+15	+3
Prunes	do	19.0	17.4	17.3	−9	−1
Raisins	do	17.4	15.4	15.4	−11	0
Bananas	Dozen	38.4	35.9	35.4	−8	−1
Oranges	do	50.9	45.4	46.1	−9	+2
All articles combined [1]					−1.5	+0.6

[1] See note 2, p. 34.

Table 2 shows for the United States average retail prices of specified food articles on August 15, 1913, and on August 15 of each year from 1918 to 1924, together with percentage changes in August of each of these specified years compared with August, 1913. For example, the price per pound of lard was 16.1 cents in August, 1913; 33.1 cents in August, 1918; 42 cents in August, 1919; 27.9 cents in August, 1920; 18.1 cents in August, 1921; 17.2 cents in August, 1922; 17.1 cents in August, 1923; and 19.3 cents in August, 1924.

As compared with the average cost in August, 1913, these figures show the following percentage increases: 106 per cent in August, 1918; 161 per cent in August, 1919; 73 per cent in August, 1920; 12 per cent in August, 1921; 7 per cent in August, 1922; 6 per cent in August, 1923, and 20 per cent in August, 1924.

The cost of the various articles of food combined showed an increase of 42.9 per cent in August, 1924, as compared with August, 1913.

TABLE 2.—AVERAGE RETAIL PRICES OF SPECIFIED FOOD ARTICLES AND PER CENT OF INCREASE OR DECREASE AUGUST 15 OF CERTAIN SPECIFIED YEARS COMPARED WITH AUGUST 15, 1913

[Percentage changes of five-tenths of 1 per cent and over are given in whole numbers]

Article	Unit	Average retail price on Aug. 15—								Per cent of increase Aug. 15 of certain specified years compared with Aug. 15, 1913						
		1913	1918	1919	1920	1921	1922	1923	1924	1918	1919	1920	1921	1922	1923	1924
		Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.							
Sirloin steak	Pound	26.4	41.5	42.1	47.2	40.0	39.0	41.1	40.7	57	59	79	52	48	56	54
Round steak	do	23.2	39.6	39.5	43.6	35.6	34.1	35.5	34.8	71	70	88	53	47	53	50
Rib roast	do	20.2	32.6	32.4	34.9	29.1	28.2	29.2	29.1	61	60	73	44	40	45	44
Chuck roast	do	16.5	28.3	26.6	27.4	20.8	20.0	20.8	21.0	72	61	66	26	21	26	27
Plate beef	do	12.2	21.7	19.3	18.5	13.5	12.6	12.7	13.1	78	58	52	11	3	4	7
Pork chops	do	21.9	42.2	46.9	45.9	38.0	35.1	32.1	34.8	93	114	110	74	60	47	59
Bacon	do	28.3	54.0	57.7	54.9	43.7	40.6	39.2	38.3	91	104	94	54	43	39	35
Ham	do	28.4	48.5	56.9	60.0	52.9	50.8	46.3	46.6	71	100	111	86	79	63	64
Lamb, leg of	do	18.9	36.9	36.4	39.7	34.3	36.0	37.2	37.3	95	93	110	81	90	97	97
Hens	do	21.5	38.6	41.8	45.0	38.9	34.9	34.5	34.8	80	94	109	81	62	60	62
Salmon, canned, red.	do	----	[1]30.2	[1]32.3	[1]38.8	36.0	31.9	31.2	31.2	----	----	----	----	----	----	----
Milk, fresh	Quart	8.8	13.6	15.5	17.0	14.3	13.0	13.7	13.7	55	76	93	63	48	56	56
Milk, evaporated	[2]	----	----	16.3	15.6	13.5	10.8	12.2	11.1	----	----	----	----	----	----	----
Butter	Pound	35.4	53.9	64.1	67.0	51.2	44.2	51.8	48.3	52	81	89	45	25	46	36
Oleomargarine	do	----	----	42.5	42.1	29.8	27.6	29.2	30.5	----	----	----	----	----	----	----
Nut margarine	do	----	----	35.8	36.0	27.8	26.6	27.6	28.8	----	----	----	----	----	----	----
Cheese	do	22.0	34.6	43.5	40.5	32.6	31.8	36.3	34.4	57	98	84	48	45	65	56
Lard	do	16.1	33.1	42.0	27.9	18.1	17.2	17.1	19.3	106	161	73	12	7	6	20
Vegetable lard substitute.	do	----	----	40.5	34.5	21.1	22.9	22.8	25.1	----	----	----	----	----	----	----
Eggs, strictly fresh	Dozen	33.0	53.6	60.2	63.6	47.6	37.1	41.5	44.6	62	82	93	44	12	26	35
Bread	Pound	5.6	9.9	10.1	11.9	9.7	8.7	8.7	8.8	77	80	113	73	55	55	57
Flour	do	3.3	6.8	7.4	8.4	5.7	5.1	4.5	5.1	106	124	155	73	55	36	55
Corn meal	do	3.0	6.8	6.6	6.9	4.5	3.9	4.1	4.7	127	120	130	50	30	37	57
Rolled oats	do	----	----	8.9	11.2	10.0	8.7	8.8	8.8	----	----	----	----	----	----	----
Corn flakes	[3]	----	----	14.0	14.6	12.2	9.8	9.7	9.7	----	----	----	----	----	----	----
Wheat cereal	[4]	----	----	25.1	30.3	29.8	25.7	24.4	24.3	----	----	----	----	----	----	----
Macaroni	Pound	----	----	19.3	21.7	20.7	20.0	19.8	19.6	----	----	----	----	----	----	----
Rice	do	8.7	13.4	15.5	18.3	8.8	9.6	9.4	10.2	54	78	110	1	10	8	17
Beans, navy	do	----	17.1	12.3	11.7	7.9	11.3	11.0	9.7	----	----	----	----	----	----	----
Potatoes	do	1.9	3.9	5.9	5.0	4.2	2.6	3.7	2.6	105	163	163	121	37	95	37
Onions	do	----	5.5	7.8	5.6	5.3	5.9	6.5	6.5	----	----	----	----	----	----	----
Cabbage	do	----	----	5.3	4.4	6.1	3.9	4.8	4.3	----	----	----	----	----	----	----
Beans, baked	[5]	----	----	17.1	16.8	14.2	13.4	12.9	12.6	----	----	----	----	----	----	----
Corn, canned	[5]	----	----	19.1	18.8	16.0	15.4	15.4	15.8	----	----	----	----	----	----	----
Peas, canned	[5]	----	----	19.1	19.4	17.6	17.6	17.6	18.2	----	----	----	----	----	----	----
Tomatoes, canned	[5]	----	----	15.9	15.2	12.0	13.6	13.0	13.3	----	----	----	----	----	----	----
Sugar, granulated	Pound	5.6	9.3	11.1	22.9	7.5	8.1	9.6	8.2	66	98	309	34	45	71	46
Tea	do	54.4	65.8	70.7	74.4	69.2	68.3	69.7	70.9	121	30	37	27	26	28	30
Coffee	do	29.8	30.1	47.8	48.4	35.6	36.2	37.6	43.4	1	60	62	19	21	26	46
Prunes	do	----	17.1	27.4	28.3	18.8	20.8	19.0	17.3	----	----	----	----	----	----	----
Raisins	do	----	15.3	18.0	28.9	30.2	23.2	17.4	15.4	----	----	----	----	----	----	----
Bananas	Dozen	----	----	39.1	45.9	38.6	34.2	38.4	35.4	----	----	----	----	----	----	----
Oranges	do	----	----	53.7	65.9	53.5	64.8	50.9	46.1	----	----	----	----	----	----	----
All articles combined [6]		----	----	----	----	----	----	----	----	69.5	90.1	105.8	53.3	37.5	45.1	42.9

[1] Both pink and red. 15–16 ounce can.
[2] 8-ounce package
[3] No. 2 can.
[4] 28-ounce package
[6] See note 2, p. 34.

Table 3 shows the changes in the retail prices of each of 22 articles of food[3] as well as the changes in the amounts of these articles that could be purchased for $1, each year, 1913 to 1923, and in August, 1924.

TABLE 3.—AVERAGE RETAIL PRICES OF SPECIFIED ARTICLES OF FOOD AND AMOUNT PURCHASABLE FOR $1 IN EACH YEAR, 1913 TO 1923, AND IN AUGUST, 1924

Year	Sirloin steak		Round steak		Rib roast		Chuck roast		Plate beef		Pork chops	
	Average retail price	Amt. for $1	Average retail price	Amt. for $1	Average retail price	Amt. for $1	Average retail price	Amt. for $1	Average retail price	Amt. for $1	Average retail price	Amt. for $1
	Per lb.	*Lbs.*	*Per lb.*	*Lbs.*	*Per lb.*	*Lbs.*	*Per lb.*	*Lbs.*	*Per lb.*	*Lbs.*	*Per lb.*	*Lbs.*
1913	$0.254	3.9	$0.223	4.5	$0.198	5.1	$0.160	6.3	$0.121	8.3	$0.210	4.8
1914	.259	3.9	.236	4.2	.204	4.9	.167	6.0	.126	7.9	.220	4.5
1915	.257	3.9	.230	4.3	.201	5.0	.161	6.2	.121	8.3	.203	4.9
1916	.273	3.7	.245	4.1	.212	4.7	.171	5.8	.128	7.8	.227	4.4
1917	.315	3.2	.290	3.4	.249	4.0	.209	4.8	.157	6.4	.319	3.1
1918	.389	2.6	.369	2.7	.307	3.3	.266	3.8	.206	4.9	.390	2.6
1919	.417	2.4	.389	2.6	.325	3.1	.270	3.7	.202	5.0	.423	2.4
1920	.437	2.3	.395	2.5	.332	3.0	.262	3.8	.183	5.5	.423	2.4
1921	.388	2.6	.344	2.9	.291	3.4	.212	4.7	.143	7.0	.349	2.9
1922	.374	2.7	.323	3.1	.276	3.6	.197	5.1	.128	7.8	.330	3.0
1923	.391	2.6	.335	3.0	.284	3.5	.202	5.0	.129	7.8	.304	3.3
1924: August	.407	2.5	.348	2.9	.291	3.4	.210	4.8	.131	7.6	.348	2.9

Year	Bacon		Ham		Lard		Hens		Eggs		Butter	
	Per lb.	*Lbs.*	*Per lb.*	*Lbs.*	*Per lb.*	*Lbs.*	*Per lb.*	*Lbs.*	*Per dz.*	*Dozs.*	*Per lb.*	*Lbs.*
1913	$0.270	3.7	$0.269	3.7	$0.158	6.3	$0.213	4.7	$0.345	2.9	$0.383	2.6
1914	.275	3.6	.273	3.7	.156	6.4	.218	4.6	.353	2.8	.362	2.8
1915	.269	3.7	.261	3.8	.148	6.8	.208	4.8	.341	2.9	.358	2.8
1916	.287	3.5	.294	3.4	.175	5.7	.236	4.2	.375	2.7	.394	2.5
1917	.410	2.4	.382	2.6	.276	3.6	.286	3.5	.481	2.1	.487	2.1
1918	.529	1.9	.479	2.1	.333	3.0	.377	2.7	.569	1.8	.577	1.7
1919	.554	1.8	.534	1.9	.369	2.7	.411	2.4	.628	1.6	.678	1.5
1920	.523	1.9	.555	1.8	.295	3.4	.447	2.2	.681	1.5	.701	1.4
1921	.427	2.3	.488	2.0	.180	5.6	.397	2.5	.509	2.0	.517	1.9
1922	.398	2.5	.488	2.0	.170	5.9	.360	2.8	.444	2.3	.479	2.1
1923	.391	2.6	.455	2.2	.177	5.6	.350	2.9	.465	2.2	.554	1.8
1924: August	.383	2.6	.466	2.1	.193	5.2	.348	2.9	.446	2.2	.483	2.1

Year	Cheese		Milk		Bread		Flour		Corn meal		Rice	
	Per lb.	*Lbs.*	*Per qt.*	*Qts.*	*Per lb.*	*Lbs.*	*Per lb.*	*Lbs.*	*Per lb.*	*Lbs.*	*Per lb.*	*Lbs.*
1913	$0.221	4.5	$0.089	11.2	$0.056	17.9	$0.033	30.3	$0.030	33.3	$0.087	11.5
1914	.229	4.4	.089	11.2	.063	15.9	.034	29.4	.032	31.3	.088	11.4
1915	.233	4.3	.088	11.4	.070	14.3	.042	23.8	.033	30.3	.091	11.0
1916	.258	3.9	.091	11.0	.073	13.7	.044	22.7	.034	29.4	.091	11.0
1917	.332	3.0	.112	9.0	.092	10.9	.070	14.3	.058	17.2	.104	9.6
1918	.359	2.8	.139	7.2	.098	10.2	.067	14.9	.068	14.7	.129	7.8
1919	.426	2.3	.155	6.5	.100	10.0	.072	13.9	.064	15.6	.151	6.6
1920	.416	2.4	.167	6.0	.115	8.7	.081	12.3	.065	15.4	.174	5.7
1921	.340	2.9	.146	6.8	.099	10.1	.058	17.2	.045	22.2	.095	10.5
1922	.329	3.0	.131	7.6	.087	11.5	.051	19.6	.039	25.6	.095	10.5
1923	.369	2.7	.138	7.2	.087	11.5	.047	21.3	.041	24.4	.095	10.5
1924: August	.344	2.9	.137	7.3	.088	11.4	.051	19.6	.047	21.3	.102	9.8

Year	Potatoes		Sugar		Coffee		Tea					
	Per lb.	*Lbs.*	*Per lb.*	*Lbs.*	*Per lb.*	*Lbs.*	*Per lb.*	*Lbs.*				
1913	$0.017	58.8	$0.055	18.2	$0.298	3.4	$0.544	1.8	-------	-------	-------	-------
1914	.018	55.6	.059	16.9	.297	3.4	.546	1.8	-------	-------	-------	-------
1915	.015	66.7	.066	15.2	.300	3.3	.545	1.8	-------	-------	-------	-------
1916	.027	37.0	.080	12.5	.299	3.3	.546	1.8	-------	-------	-------	-------
1917	.043	23.3	.093	10.8	.302	3.3	.582	1.7	-------	-------	-------	-------
1918	.032	31.3	.097	10.3	.305	3.3	.648	1.5	-------	-------	-------	-------
1919	.038	26.3	.113	8.8	.433	2.3	.701	1.4	-------	-------	-------	-------
1920	.063	15.9	.194	5.2	.470	2.1	.733	1.4	-------	-------	-------	-------
1921	.031	32.3	.080	12.5	.363	2.8	.697	1.4	-------	-------	-------	-------
1922	.028	35.7	.073	13.7	.361	2.8	.681	1.5	-------	-------	-------	-------
1923	.029	34.5	.101	9.9	.377	2.7	.695	1.4	-------	-------	-------	-------
1924: August	.026	38.5	.082	12.2	.434	2.3	.709	1.4	-------	-------	-------	-------

[3] Although monthly prices on 43 food articles have been secured since January, 1919, prices on only 22 of these articles have been secured each month since 1913.

Index Numbers of Retail Prices of Food in the United States

IN TABLE 4 index numbers are given which show the changes in the retail prices of each of 22 food articles,[4] by years from 1907 o 1923, and by months for 1923[5] and for January to August, 1924. These index numbers, or relative prices, are based on the year 1913 as 100, and are computed by dividing the average price of each commodity for each month and each year by the average price of that commodity for 1913. These figures must be used with caution. For example, the relative price of rib roast for the year 1923 was 143.4, which means that the average money price for the year 1923 was 43.4 per cent higher than the average money price for the year 1913. The relative price of rib roast for the year 1922 was 139.4, which figures show an increase of 4 points but an increase of slightly less than 3 per cent in the year.

In the last column of Table 4 are given index numbers, showing the changes in the retail cost of all articles of food combined. From January, 1913, to December, 1920, 22 articles have been included in the index, and beginning with January, 1921, 43 articles have been used.[4] For an explanation of the method used in making the link between the cost of the market basket of 22 articles, weighted according to the average family consumption in 1901, and the cost of the market basket based on 43 articles and weighted according to the consumption in 1918, see MONTHLY LABOR REVIEW for March, 1921 (p. 25).

The curve shown in the chart on page 40 pictures more readily to the eye the changes in the cost of the food budget than do the index numbers given in the table. The chart has been drawn on the logarithmic scale, because the percentages of increase or decrease are more accurately shown than on the arithmetic scale.

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[4] See note 2, p. 34.

[5] For index numbers of each month, January, 1913, to December, 1920, see MONTHLY LABOR REVIEW for February, 1921, pp. 19–21, and for each month of 1921 and 1922 see MONTHLY LABOR REVIEW of February, 1923, p. 69.

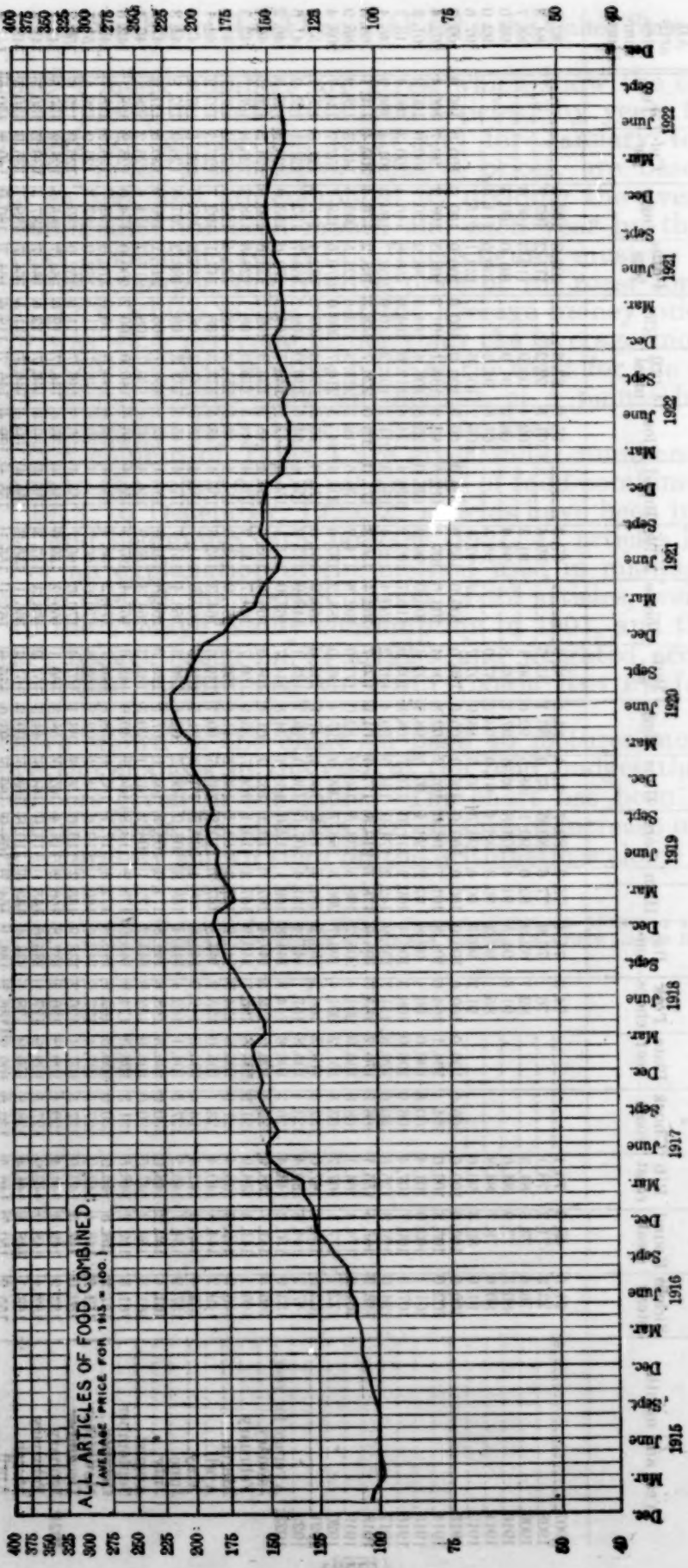
TABLE 4.—INDEX NUMBERS SHOWING CHANGES IN THE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN THE UNITED STATES, BY YEARS 1907 TO 1923, AND BY MONTHS FOR 1923 AND JANUARY TO AUGUST, 1924

TABLE 4.—INDEX NUMBERS SHOWING CHANGES IN THE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN THE UNITED STATES, BY YEARS 1907 TO 1923, AND BY MONTHS FOR 1923 AND JANUARY TO AUGUST, 1924

[Average for year 1913=100]

Year and month	Sirloin steak	Round steak	Rib roast	Chuck roast	Plate beef	Pork chops	Bacon	Ham	Lard	Hens	Eggs	Butter	Cheese	Milk	Bread	Flour	Corn meal	Rice	Potatoes	Sugar	Coffee	Tea	All articles combined
1907	71.5	68.0	76.1	------	------	74.3	74.4	75.7	80.7	81.4	84.1	85.3	------	87.2	------	95.0	87.6	------	105.3	105.3	------	------	82.0
1908	73.3	71.2	78.1	------	------	76.1	76.9	77.6	80.5	83.0	86.1	85.5	------	89.6	------	101.5	92.2	------	111.2	107.7	------	------	84.3
1909	76.6	73.5	81.3	------	------	82.7	82.9	82.0	90.1	88.5	92.6	90.1	------	91.3	------	109.4	93.9	------	112.3	106.6	------	------	88.7
1910	80.3	77.9	84.6	------	------	91.6	94.5	91.4	103.8	93.6	97.7	93.8	------	94.6	------	108.2	94.9	------	101.0	109.3	------	------	93.0
1911	80.6	78.7	84.8	------	------	85.1	91.3	89.3	88.4	91.0	93.5	87.9	------	95.5	------	101.6	94.3	------	130.5	111.4	------	------	92.9
1912	91.0	89.3	93.6	------	------	91.2	90.5	90.6	93.5	93.5	98.9	97.7	------	97.4	------	105.2	101.6	------	132.1	115.1	------	------	97.6
1913	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
1914	102.0	105.8	103.0	104.4	104.1	104.6	101.8	101.7	98.6	102.2	102.3	94.4	103.6	100.5	112.5	103.9	105.1	101.2	108.3	108.2	99.7	100.4	102.4
1915	101.1	103.0	101.4	100.6	100.0	96.4	99.8	97.2	93.4	97.5	98.7	93.4	105.0	99.2	125.0	125.8	108.4	104.3	88.9	120.1	100.6	100.2	101.3
1916	107.5	109.7	107.4	106.9	106.0	108.3	106.4	109.2	111.0	110.7	108.8	103.0	116.7	102.2	130.4	134.6	112.6	104.6	158.8	146.4	100.3	100.4	113.7
1917	124.0	129.8	125.5	130.6	129.8	151.7	151.9	142.2	174.9	134.5	139.4	127.2	150.4	125.4	164.3	211.2	192.2	119.0	252.7	169.3	101.4	106.9	146.4
1918	153.2	165.5	155.1	166.3	170.2	185.7	195.9	178.1	210.8	177.0	164.9	150.7	162.4	156.2	175.0	203.0	226.7	148.3	188.2	176.4	102.4	119.1	168.3
1919	164.2	174.4	164.1	168.8	166.9	201.4	205.2	198.5	233.5	193.0	182.0	177.0	192.8	174.2	178.6	218.2	213.3	173.6	223.5	205.5	145.3	128.9	185.9
1920	172.1	177.1	167.7	163.8	151.2	201.4	193.7	206.3	186.7	209.9	197.4	183.0	188.2	187.6	205.4	245.5	216.7	200.0	370.6	352.7	157.7	134.7	203.4
1921	152.8	154.3	147.0	132.5	118.2	166.2	158.2	181.4	113.9	186.4	147.5	135.0	153.9	164.0	176.8	175.8	150.0	109.2	182.4	145.5	121.8	128.1	153.3
1922	147.2	144.8	139.4	123.1	105.8	157.1	147.4	181.4	107.6	169.0	128.7	125.1	148.9	147.2	155.4	154.5	130.0	109.2	164.7	132.7	121.1	125.2	141.6
1923: Average for year	153.9	150.2	143.4	126.3	106.6	144.8	144.8	169.1	112.0	164.3	134.8	144.7	167.0	155.1	155.4	142.4	136.7	109.2	170.6	183.6	126.5	127.8	146.2
January	146.5	141.7	138.9	122.5	106.6	139.5	147.4	167.7	110.1	162.0	161.4	154.3	168.8	153.9	155.4	148.5	133.3	109.2	123.5	150.9	124.2	126.3	144.4
February	146.1	141.3	138.9	121.9	105.8	136.7	145.9	167.3	110.1	166.7	133.9	150.7	169.7	153.9	155.4	148.5	133.3	108.1	123.5	158.2	125.8	126.7	142.3
March	146.9	142.2	139.4	121.9	105.8	134.8	145.2	167.3	110.1	168.1	111.6	150.4	167.9	152.8	155.4	145.5	133.3	108.1	129.4	185.5	127.2	126.7	141.9
April	149.2	144.8	140.4	123.1	105.0	135.2	144.8	167.7	110.8	169.5	99.7	149.6	164.3	152.8	155.4	148.5	133.3	108.1	147.1	192.7	127.5	127.2	143.1
May	152.4	148.0	142.4	124.4	105.0	142.9	144.8	168.4	109.5	170.0	101.7	136.0	160.6	151.7	155.4	145.5	133.3	108.1	158.8	203.6	127.5	127.4	143.4
June	157.9	154.7	145.5	127.5	104.1	142.4	144.4	168.8	108.9	166.2	102.6	130.6	163.4	151.7	155.4	145.5	133.3	108.1	188.2	201.8	126.9	127.8	144.3
July	161.4	159.2	148.0	130.0	105.8	148.6	144.8	171.0	108.2	163.4	107.5	128.2	163.8	152.8	157.1	142.4	136.7	108.1	247.1	190.9	126.5	127.6	147.2
August	161.8	159.2	147.5	130.0	105.0	152.9	145.2	172.1	108.2	162.0	120.3	135.3	164.3	153.9	155.4	136.4	136.7	108.1	217.7	174.6	126.2	128.1	146.4
September	161.8	159.2	148.5	131.3	108.3	174.8	145.9	173.2	113.3	164.3	140.9	143.6	167.4	157.3	155.4	136.4	140.0	109.2	200.0	174.6	126.2	128.1	149.3
October	157.9	154.3	146.0	130.0	108.3	162.9	145.6	172.5	117.7	163.4	158.3	146.7	174.2	158.4	155.4	139.4	143.3	110.3	170.6	192.7	126.9	128.7	149.8
November	153.2	148.4	142.9	127.5	107.4	137.6	142.6	169.1	119.6	158.2	192.2	153.8	170.6	160.7	155.4	139.4	146.7	111.5	152.9	187.3	126.9	129.4	151.1
December	152.0	147.5	142.9	127.5	107.4	126.2	138.9	166.2	119.6	156.8	188.1	157.4	170.6	160.7	155.4	136.4	146.7	111.5	152.9	189.1	126.9	129.0	150.3
1924: January	153.9	149.3	144.4	129.4	109.9	130.5	137.8	166.2	118.4	162.0	158.3	160.1	169.2	159.6	155.4	136.4	146.7	112.6	164.7	185.5	128.2	130.5	149.1
February	152.4	148.0	142.9	127.5	109.9	127.1	135.6	165.1	113.9	164.8	144.3	157.2	168.3	157.3	155.4	139.4	146.7	112.6	164.7	187.3	130.2	130.2	147.3
March	153.1	148.4	144.4	128.8	109.9	128.1	134.4	163.6	110.8	168.5	100.9	151.4	166.1	156.2	155.4	139.4	146.7	111.5	164.7	189.1	136.9	130.3	143.7
April	155.9	150.7	146.5	130.6	109.9	136.7	134.1	164.7	108.9	169.5	93.0	130.8	161.1	155.1	155.4	139.4	146.7	112.6	164.7	180.0	140.3	130.5	141.3
May	159.8	155.2	148.5	133.1	110.7	142.4	133.7	164.7	108.2	171.8	95.1	120.4	156.6	152.8	155.4	139.4	146.7	113.8	170.6	167.3	141.6	130.7	141.0
June	160.2	156.1	148.5	132.5	109.1	143.8	134.1	165.8	107.0	168.5	104.6	126.9	155.7	151.7	155.4	139.4	146.7	113.8	194.1	150.9	141.9	130.3	142.4
July	160.2	155.2	147.0	131.3	108.3	144.3	134.8	166.2	108.2	165.7	114.2	129.2	155.7	151.7	155.4	145.5	150.0	114.9	194.1	152.7	142.3	130.1	143.3
August	160.2	156.1	147.0	131.3	108.3	165.7	141.9	173.2	122.2	163.4	129.3	126.1	155.7	153.9	157.1	154.5	156.7	117.2	152.9	149.1	145.6	130.3	144.2

TREND IN RETAIL PRICES OF FOOD IN THE UNITED STATES, JANUARY, 1915, TO AUGUST, 1924



Retail Prices of Food in

AVERAGE retail food prices are shown in Table 5 for 40 cities for other cities prices are shown for the same dates, with the excep until after 1913.

TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL

[The prices shown in this table are computed from reports sent monthly to the bureau by retail dealers.

Article	Unit	Atlanta, Ga.				Baltimore, Md.				Birmingham, Ala.			
		Aug. 15—		July 15, 1924	Aug. 15, 1924	Aug. 15—		July 15, 1924	Aug. 15, 1924	Aug. 15—		July 15, 1924	Aug. 15, 1924
		1913	1923			1913	1923			1913	1923		
		Cts.	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*
Sirloin steak	Pound	25.0	34.9	25.9	35.3	24.3	40.7	40.3	40.2	28.1	37.5	37.4	37.9
Round steak	do	21.5	31.6	32.5	31.9	23.0	37.3	36.3	36.2	22.5	32.6	33.1	33.1
Rib roast	do	20.1	27.0	27.2	26.8	19.3	31.3	31.3	31.1	20.6	27.6	27.3	27.8
Chuck roast	do	15.5	20.3	20.5	20.7	16.0	20.8	21.2	20.9	16.8	22.4	21.4	21.4
Plate beef	do	9.4	12.2	12.7	12.7	12.6	13.4	13.4	13.3	10.5	13.3	13.9	13.8
Pork chops	do	23.5	29.1	28.6	33.4	19.3	32.8	31.0	33.6	20.0	30.7	28.2	32.2
Bacon, sliced	do	32.0	36.1	33.0	36.4	26.3	34.4	32.2	35.3	35.0	39.0	36.7	38.5
Ham, sliced	do	31.0	47.1	45.0	46.6	34.5	51.7	51.1	52.0	31.3	46.4	45.3	46.0
Lamb, leg of	do	19.4	34.0	33.6	35.7	18.3	37.7	40.3	37.2	23.3	39.0	35.7	36.4
Hens	do	20.2	30.4	31.5	31.2	21.2	36.4	37.9	37.1	17.0	29.1	31.1	30.6
Salmon, canned, red	do		29.2	30.0	29.9		26.5	26.1	26.4		30.0	30.2	30.2
Milk, fresh	Quart	10.0	16.7	16.0	16.0	8.8	12.0	13.0	13.0	10.3	18.5	18.5	18.5
Milk, evaporated	15-16-oz. can		14.4	13.3	13.2		12.0	11.1	11.0		13.2	12.4	12.5
Butter	Pound	37.1	54.2	52.3	52.1	36.7	56.2	54.4	53.7	39.0	52.8	51.2	51.8
Oleomargarine	do		32.4	33.0	34.0		27.9	27.9	29.3		33.8	34.4	35.1
Nut margarine	do		26.7	26.5	26.5		27.0	26.4	26.8		31.5	32.7	33.2
Cheese	do	25.0	35.0	31.7	32.1	22.5	35.9	35.4	34.3	23.0	35.9	33.5	33.5
Lard	do	16.1	17.5	17.5	19.2	15.0	16.6	16.6	20.0	16.5	17.3	17.2	19.8
Vegetable lard substitute	do		22.6	23.6	24.2		22.2	24.1	24.7		19.5	20.9	21.6
Eggs, strictly fresh	Dozen	28.3	37.2	37.0	40.1	27.7	37.6	36.1	39.6	28.3	38.9	39.9	42.4
Bread	Pound	6.0	9.2	9.1	9.1	5.4	8.8	8.8	8.9	5.4	8.9	8.8	8.8
Flour	do	3.5	5.0	5.5	5.9	3.2	4.3	4.5	4.8	3.6	5.5	5.5	5.8
Corn meal	do	2.6	3.8	3.8	4.1	2.5	3.4	3.6	3.8	2.4	3.4	3.6	4.1
Rolled oats	do		9.2	8.9	9.0		8.4	8.4	8.3		9.2	9.3	9.3
Corn flakes	8-oz. pkg		9.7	9.7	9.8		8.8	8.8	8.9		9.9	10.1	10.1
Wheat cereal	28-oz. pkg		26.6	25.5	25.5		22.8	22.3	22.6		26.1	25.8	25.6
Macaroni	Pound		20.9	21.1	21.4		19.2	19.1	18.0		18.9	19.2	19.4
Rice	do	8.6	8.6	9.7	9.7	9.0	9.2	10.0	9.8	8.2	9.1	10.3	10.4
Beans, navy	do		13.0	12.0	12.1		10.5	9.0	9.3		12.3	11.6	11.3
Potatoes	do	2.3	5.2	3.9	3.5	1.7	4.2	2.7	2.3	2.3	4.7	4.0	3.9
Onions	do		8.1	8.4	8.2		6.4	6.8	6.6		7.4	7.6	7.6
Cabbage	do		5.9	5.5	5.2		4.9	4.4	4.9		6.4	5.7	5.6
Beans, baked	No. 2 can		13.6	12.0	12.3		11.6	11.6	11.3		14.0	13.1	13.3
Corn, canned	do		15.7	15.8	15.8		14.7	15.3	15.0		16.9	16.1	15.9
Peas, canned	do		17.4	18.7	18.8		16.8	17.2	17.2		20.6	21.3	21.3
Tomatoes, canned	do		13.2	13.6	13.6		12.2	12.0	12.4		11.8	12.4	12.4
Sugar, granulated	Pound	5.9	10.3	9.0	8.9	5.1	9.0	7.6	7.5	5.7	10.0	8.9	8.7
Tea	do	60.0	92.7	93.3	93.3	56.0	67.6	68.5	69.0	61.3	84.8	85.5	85.5
Coffee	do	32.0	36.7	41.3	42.9	24.8	32.9	38.3	41.1	28.8	39.1	41.2	42.2
Prunes	do		19.8	18.1	17.6		18.1	16.4	16.0		20.8	20.3	20.6
Raisins	do		20.0	16.8	16.5		15.1	14.2	13.7		19.2	16.9	17.0
Bananas	Dozen		29.4	26.2	23.1		28.6	27.6	26.4		38.3	37.5	37.4
Oranges	do		48.4	41.4	44.4		53.1	48.9	48.7		52.3	44.8	44.5

[1] The steak for which prices are here quoted is called "sirloin" in this city, but in most of the other cities included in this report it would be known as "porterhouse" steak

51 Cities on Specified Dates

August 15, 1913 and 1923, and for July and August 15, 1924. For 11
tion of August, 1913, as these cities were not scheduled by the bureau

ARTICLES OF FOOD IN 51 CITIES ON SPECIFIED DATES

As some dealers occasionally fail to report, the number of quotations varies from month to month]

Boston, Mass.				Bridgeport, Conn.			Buffalo, N. Y.				Butte, Mont.			Charleston, S. C.			
Aug. 15—		July 15, 1924	Aug. 15, 1924	Aug. 15, 1923	July 15, 1924	Aug. 15, 1924	Aug. 15—		July 15, 1924	Aug. 15, 1924	Aug. 15, 1923	July 15, 1924	Aug. 15, 1924	Aug. 15—		July 15, 1924	Aug. 15, 1924
1913	1923						1913	1923						1913	1923		
Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
[1] 35.8	[1] 64.7	[1] 64.9	[1] 64.5	49.2	48.0	48.3	23.8	40.6	40.3	40.5	30.1	30.8	30.5	21.8	35.6	33.3	33.3
36.2	56.7	52.6	53.6	42.9	40.5	40.5	20.5	34.2	33.5	34.1	25.8	25.5	25.9	20.0	32.5	30.6	30.0
25.6	39.6	39.0	38.5	37.2	35.5	35.7	17.0	28.5	29.0	28.8	23.6	24.1	23.0	20.0	28.1	26.1	25.0
18.0	26.2	25.0	25.1	26.3	25.2	25.4	15.5	20.7	21.8	21.5	16.8	16.2	16.2	15.8	20.6	19.4	19.2
-----	16.8	16.5	16.2	11.3	10.5	10.7	11.5	11.1	11.7	11.7	10.6	12.3	10.8	11.9	14.1	13.3	13.3
24.2	35.5	33.1	37.7	33.8	31.5	37.5	22.0	35.8	33.1	37.3	29.0	26.9	33.2	22.5	30.6	30.6	31.7
25.8	37.1	36.5	38.4	45.2	42.2	43.1	24.5	32.8	30.0	32.0	47.7	45.0	46.8	27.5	34.2	33.4	33.9
33.8	52.8	51.2	53.1	56.5	51.0	52.3	28.0	46.3	46.3	47.2	52.3	50.0	52.0	28.3	41.7	42.3	43.5
23.0	40.8	41.4	39.9	41.4	40.6	39.1	15.5	33.1	35.5	32.0	32.3	37.2	37.2	21.3	41.7	38.8	39.4
25.6	38.7	39.6	38.9	38.6	38.9	38.1	21.8	34.9	35.8	34.9	29.3	29.9	30.3	22.2	37.4	35.8	35.2
-----	28.9	29.5	29.6	30.5	29.9	29.9	-----	27.3	27.3	27.1	37.3	36.9	37.2	-----	25.8	26.5	26.5
8.9	14.9	13.4	13.9	14.0	14.0	14.0	8.0	12.5	12.0	12.0	14.2	14.3	14.3	11.7	18.0	18.5	18.5
-----	12.8	11.9	11.6	12.5	11.6	11.4	-----	11.9	10.6	10.5	12.5	10.5	10.6	-----	12.0	10.6	10.6
35.9	52.6	51.4	49.7	51.9	50.6	50.8	32.9	51.0	49.5	46.9	52.3	45.0	46.8	34.2	50.0	47.9	48.1
-----	31.2	31.0	32.3	28.3	29.4	30.0	-----	28.3	28.9	29.6	-----	32.7	33.6	-----	28.3	31.3	30.6
-----	26.1	28.0	28.1	26.3	27.5	28.0	-----	26.9	27.3	27.6	32.7	37.5	37.3	-----	28.5	31.5	31.5
22.4	38.0	35.7	36.5	37.9	37.3	38.7	20.0	36.2	34.4	35.2	37.1	19.8	22.1	20.5	34.2	29.7	29.8
15.7	17.5	17.3	19.4	16.6	16.7	18.5	14.5	16.1	15.9	18.6	20.5	27.1	27.3	15.3	18.5	18.3	19.6
-----	24.1	21.4	22.0	23.4	25.0	25.1	-----	22.2	24.4	25.0	25.9	47.8	50.5	-----	22.4	24.3	25.6
42.4	64.2	56.3	69.0	58.2	50.8	58.6	29.8	42.3	38.2	44.8	50.5	-----	-----	30.0	36.2	41.8	41.6
5.9	8.4	8.5	8.5	8.5	8.3	8.3	5.6	8.3	8.4	8.4	9.7	9.6	9.6	6.0	10.3	10.7	10.7
3.8	4.9	5.5	5.7	4.7	4.9	5.2	3.0	3.9	4.5	4.9	5.1	5.3	5.6	3.7	5.9	5.8	6.1
3.5	5.1	5.3	5.3	6.8	7.1	7.3	2.6	3.8	4.3	4.4	3.9	4.3	4.5	2.4	3.1	3.6	3.9
-----	8.8	9.0	9.0	8.4	8.2	8.4	-----	7.6	7.5	7.4	6.8	6.7	7.0	-----	9.4	9.3	9.3
-----	9.5	9.5	9.4	9.6	9.2	9.2	-----	9.2	8.9	8.9	11.9	12.3	12.3	-----	10.0	10.0	10.0
-----	24.6	24.2	24.1	23.4	23.4	23.4	-----	24.0	23.9	23.9	28.8	27.5	27.8	-----	25.0	25.0	25.0
-----	23.4	22.9	23.0	24.2	23.1	23.1	-----	21.7	20.9	20.7	21.3	20.4	20.5	-----	20.6	20.0	20.0
9.2	11.0	11.3	11.1	10.2	10.9	10.6	9.3	8.9	9.6	9.9	10.0	9.8	10.0	5.5	6.4	7.9	8.0
-----	10.5	10.3	10.3	11.6	10.4	10.3	-----	11.3	9.4	9.5	10.8	10.6	10.7	-----	12.0	10.9	11.1
1.9	4.5	3.6	2.4	4.0	3.3	2.3	2.0	4.2	3.1	2.3	3.3	3.6	3.1	2.3	4.1	2.7	2.9
-----	6.9	8.4	7.2	6.9	7.3	6.6	-----	6.6	7.3	7.1	5.4	6.4	6.1	-----	6.4	6.8	6.5
-----	5.2	5.9	5.1	5.4	5.3	4.0	-----	5.8	4.9	3.5	5.4	6.5	5.6	-----	6.1	5.7	5.1
-----	14.7	14.0	14.0	11.9	12.3	12.3	-----	11.4	10.4	10.4	17.5	15.7	15.7	-----	11.0	10.5	10.4
-----	19.5	18.8	18.6	18.9	18.9	18.8	-----	14.7	15.4	15.9	15.2	15.3	15.7	-----	14.4	14.4	14.8
-----	21.6	21.5	21.8	21.5	21.5	21.2	-----	16.1	16.6	16.6	16.3	16.3	16.4	-----	18.0	18.3	18.3
-----	12.9	12.9	12.7	13.5	13.9	14.0	-----	13.4	13.9	13.8	14.9	12.9	14.6	-----	10.8	10.7	10.7
5.6	9.4	8.1	7.9	9.6	8.2	7.7	5.5	9.3	7.7	7.7	12.0	10.5	10.6	5.1	9.2	7.8	7.7
58.6	69.7	69.2	68.8	58.3	57.8	57.8	45.0	62.2	65.0	64.4	82.5	84.0	85.0	50.0	71.4	70.3	70.3
33.0	43.2	49.4	49.7	36.1	40.9	41.7	29.3	35.2	39.3	41.3	45.4	50.3	51.8	26.3	33.8	36.3	36.3
-----	18.9	17.4	17.2	18.9	16.9	17.3	-----	18.9	16.4	16.8	20.6	18.8	18.9	-----	18.6	15.9	14.6
-----	15.9	15.0	14.8	16.8	15.1	15.2	-----	15.3	14.2	14.1	21.1	17.9	18.7	-----	16.9	14.8	14.8
-----	49.6	45.5	47.3	37.7	34.5	35.0	-----	46.0	39.4	39.6	[2] 15.2	[2] 15.3	[2] 15.0	-----	40.0	40.0	39.3
-----	53.4	56.2	56.8	52.7	49.6	51.2	-----	52.1	49.0	50.6	48.3	41.6	40.8	-----	50.8	42.2	40.0

[1] Per pound.

TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTI

Article	Unit	Chicago, Ill.				Cincinnati, Ohio				Cleveland, Ohio			
		Aug. 15—		July 15, 1924	Aug. 15, 1924	Aug. 15—		July 15, 1924	Aug. 15, 1924	Aug. 15—		July 15, 1924	Aug. 15, 1924
		1913	1923			1913	1923			1913	1923		
		Cts.	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*
Sirloin steak	Pound	24.1	41.6	41.9	41.9	24.1	37.1	36.4	36.1	25.4	38.2	39.1	38.9
Round steak	do	21.2	32.2	32.7	32.9	22.1	33.4	31.9	32.0	22.9	31.2	32.2	32.4
Rib roast	do	20.2	29.9	31.8	31.6	19.3	29.0	28.3	27.9	18.7	26.0	26.5	26.4
Chuck roast	do	15.7	19.5	20.9	21.0	15.2	19.0	18.8	18.6	16.9	20.0	21.6	21.5
Plate beef	do	11.4	11.6	12.4	12.9	11.0	14.0	13.9	13.8	12.0	11.0	11.5	11.5
Pork chops	do	20.9	30.9	27.2	32.0	21.7	32.4	28.8	33.9	22.1	33.4	32.3	38.6
Bacon, sliced	do	32.0	44.7	41.0	43.2	26.3	33.8	30.5	32.5	30.3	40.0	37.5	39.9
Ham, sliced	do	32.2	48.6	47.0	49.0	30.2	48.2	47.8	49.1	37.3	48.8	50.0	51.0
Lamb, leg of	do	19.9	37.0	37.7	36.4	16.5	32.3	35.1	33.1	19.6	34.9	38.0	35.8
Hens	do	19.7	32.9	34.0	34.1	23.4	34.9	35.2	35.2	21.5	36.1	36.5	36.5
Salmon, canned, red	do	----	33.3	32.3	32.0	----	28.2	28.5	28.3	----	29.1	29.2	29.5
Milk, fresh	Quart	8.0	14.0	14.0	14.0	8.0	12.0	10.0	10.0	8.0	14.0	12.0	14.0
Milk, evaporated	15–16-oz. can	----	11.4	10.8	10.7	----	11.5	10.3	10.2	----	11.9	10.7	10.6
Butter	Pound	32.7	49.2	47.4	45.7	35.5	50.0	48.7	46.3	35.7	53.5	50.4	48.0
Oleomargarine	do	----	25.7	26.4	27.1	----	29.8	30.2	31.5	----	29.1	30.9	31.3
Nut margarine	do	----	24.4	24.9	25.0	----	27.6	28.2	29.1	----	28.1	30.1	30.0
Cheese	do	25.0	40.0	38.5	38.8	21.0	36.5	34.0	33.6	23.0	35.0	33.1	32.7
Lard	do	15.1	16.8	17.6	19.0	14.3	15.3	15.7	18.4	16.6	17.8	18.4	20.5
Vegetable lard substitute.	do	----	23.5	25.5	25.7	----	23.4	25.1	25.1	----	24.3	26.5	26.8
Eggs, strictly fresh	Dozen	27.3	39.2	39.7	43.8	24.9	33.7	34.1	36.5	33.3	41.4	38.9	48.4
Bread	Pound	6.1	9.7	9.7	9.7	4.8	8.4	8.4	8.4	5.6	7.9	8.0	8.0
Flour	do	2.9	4.0	4.4	4.6	3.3	4.4	4.7	5.0	3.2	4.6	4.8	5.1
Corn meal	do	2.8	5.3	5.4	5.6	2.7	3.4	3.9	4.1	2.8	3.8	4.2	4.5
Rolled oats	do	----	8.5	8.5	8.4	----	8.7	8.4	8.4	----	8.6	8.7	8.7
Corn flakes	8-oz. pkg	----	9.2	9.3	9.1	----	9.3	9.0	9.1	----	9.8	10.0	9.8
Wheat cereal	28-oz. pkg	----	23.4	23.3	23.5	----	22.8	23.2	23.2	----	24.4	24.5	24.6
Macaroni	Pound	----	18.3	17.8	17.8	----	16.6	15.9	15.9	----	19.2	19.5	19.4
Rice	do	9.0	10.0	10.6	10.8	8.8	9.0	10.2	10.2	8.5	9.2	10.1	10.4
Beans, navy	do	----	10.7	9.6	9.7	----	10.3	7.7	7.8	----	10.7	8.5	8.5
Potatoes	do	2.0	3.7	3.6	2.8	2.2	2.9	3.1	2.4	2.1	4.2	3.3	2.5
Onions	do	----	6.0	7.1	6.3	----	6.0	6.0	5.6	----	5.9	7.0	6.5
Cabbage	do	----	4.5	5.2	4.1	----	4.2	3.7	3.5	----	5.2	5.7	4.3
Beans, baked	No. 2 can	----	12.9	12.9	12.8	----	11.6	11.3	11.1	----	12.9	12.8	12.5
Corn, canned	do	----	15.2	15.8	15.9	----	13.7	14.1	14.4	----	15.5	16.0	16.1
Peas, canned	do	----	16.7	17.8	17.8	----	16.9	16.9	17.1	----	16.7	17.2	17.5
Tomatoes, canned	do	----	14.0	14.2	14.3	----	12.6	12.7	13.2	----	13.8	14.1	14.2
Sugar, granulated	Pound	5.2	9.1	8.1	8.0	5.4	9.5	8.1	8.0	5.6	9.2	8.2	8.1
Tea	do	55.0	72.6	72.3	72.1	60.0	72.3	74.4	74.2	50.0	68.7	66.4	65.8
Coffee	do	30.7	38.1	43.8	43.5	25.6	33.1	37.3	38.5	26.5	40.0	45.3	46.4
Prunes	do	----	19.4	19.2	18.6	----	19.0	17.6	17.4	----	18.0	17.3	17.7
Raisins	do	----	17.3	16.4	16.6	----	17.8	15.5	15.4	----	17.2	15.0	15.0
Bananas	Dozen	----	40.0	40.4	40.2	----	41.5	37.9	37.5	----	52.3	47.5	44.3
Oranges	do	----	52.3	48.2	50.0	----	50.1	41.9	43.7	----	50.7	45.9	45.8

[1] The steak for which prices are here quoted is called "rump" in this city, but in most of the other cities included in this report it would be known as "porterhouse" steak.

CLES OF FOOD IN 51 CITIES ON SPECIFIED DATES—Continued

Columbus, Ohio			Dallas, Tex.				Denver, Colo.				Detroit, Mich.				Fall River, Mass.			
Aug. 15, 1923	July 15, 1924	Aug. 15, 1924	Aug. 15—		July 15, 1924	Aug. 15, 1924	Aug. 15—		July 15, 1924	Aug. 15, 1924	Aug 15—		July 15, 1924	Aug. 15, 1924	Aug. 15—		July 15, 1924	Aug. 15, 1924
			1913	1923			1913	1923			1913	1923			1913	1923		
Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
36.6	38.7	39.1	22.8	33.9	34.5	33.8	24.3	35.2	32.8	33.5	26.3	40.6	40.1	40.5	[1]36.0	[1]60.2	[1]59.3	[1]60.3
32.5	33.3	33.7	20.8	30.3	30.0	29.8	22.2	30.4	29.0	29.6	21.0	32.6	32.4	32.7	28.4	44.4	43.3	43.8
26.9	27.9	29.8	20.1	26.4	27.5	28.0	17.8	24.9	22.9	23.6	20.5	27.8	28.4	28.5	23.2	29.9	27.9	28.5
20.7	23.5	23.3	16.7	21.2	21.8	21.6	15.8	18.3	18.0	18.0	15.0	20.3	20.8	20.7	18.4	21.9	21.7	21.8
12.0	14.8	14.9	12.9	15.8	15.6	15.5	9.6	10.3	10.1	10.3	11.3	11.6	12.5	12.5	-----	12.6	13.8	13.8
28.6	29.8	31.9	22.0	30.6	29.3	32.0	20.0	30.7	28.4	34.2	21.5	34.7	31.1	36.7	22.0	30.8	28.8	32.8
38.8	37.5	39.2	38.0	37.9	39.5	41.5	30.5	43.2	40.5	40.9	25.0	40.9	35.1	37.1	25.7	36.9	32.7	33.3
45.8	47.4	48.3	31.3	50.0	49.4	50.6	33.8	50.0	47.4	49.3	28.0	49.9	49.7	51.0	32.5	47.2	45.7	47.4
36.2	41.0	43.0	22.0	41.3	42.5	40.8	16.1	35.6	35.2	36.1	17.3	38.9	40.1	38.4	21.0	40.9	40.9	40.8
31.2	33.5	34.2	17.7	29.0	28.8	28.2	19.4	28.4	30.4	30.3	21.8	34.9	36.5	35.6	25.0	42.9	41.3	41.8
31.0	32.0	30.8	-----	30.2	31.4	31.4	-----	33.2	32.9	32.6	-----	29.9	29.4	29.4	-----	31.1	30.8	30.8
12.0	12.0	12.0	10.0	15.0	15.0	15.0	8.4	11.7	11.7	11.7	7.9	15.0	14.0	14.0	9.0	14.0	12.0	13.4
11.8	10.8	11.0	-----	14.0	13.6	13.4	-----	11.6	10.7	10.6	-----	11.8	10.6	10.5	-----	13.4	12.5	12.3
49.3	48.3	46.3	36.0	50.5	50.3	49.9	34.3	47.9	44.7	42.1	33.7	51.9	49.2	47.1	34.6	50.3	50.5	48.8
27.8	28.8	30.0	-----	27.5	35.0	35.0	-----	29.3	32.5	32.5	-----	29.0	29.6	30.2	-----	31.7	31.7	31.7
26.3	27.8	29.2	-----	31.3	32.6	33.1	-----	28.6	29.3	29.4	-----	26.5	27.1	27.3	-----	277	30.0	30.0
33.9	33.5	33.3	20.0	35.2	32.8	32.8	26.1	38.7	36.7	36.7	20.7	36.8	35.2	35.0	22.8	38.4	37.9	38.4
14.3	15.0	18.1	16.8	20.3	21.2	23.3	16.5	18.6	18.0	20.4	16.6	17.3	17.6	19.2	15.3	16.5	16.6	18.9
22.4	25.0	25.1	-----	20.3	22.3	23.1	-----	20.9	25.8	26.2	-----	23.6	25.2	25.9	-----	24.6	26.0	26.0
32.2	31.5	36.8	27.0	35.6	35.7	38.2	30.0	38.3	36.1	40.0	30.0	41.2	38.2	42.8	41.8	60.6	48.5	60.1
7.7	7.7	7.7	5.4	8.7	8.7	8.7	5.4	7.8	7.7	7.7	5.6	8.6	8.8	8.8	6.2	9.1	8.8	8.8
4.1	4.4	4.7	3.2	4.3	4.6	4.9	2.5	3.6	3.7	4.0	3.1	4.1	4.4	4.6	3.4	4.9	4.9	5.2
3.3	3.7	4.0	2.8	3.6	4.4	4.6	2.5	3.1	3.5	3.6	2.8	4.4	4.6	4.8	3.5	6.1	7.1	7.2
9.1	9.5	9.5	-----	10.6	10.5	10.3	-----	9.1	8.9	9.0	-----	8.8	9.0	9.0	-----	9.7	9.5	9.5
10.1	9.7	9.7	-----	10.9	9.8	9.8	-----	9.9	10.0	10.0	-----	9.1	8.9	8.9	-----	9.9	10.1	10.0
23.8	24.3	24.1	-----	25.0	25.2	25.6	-----	24.7	24.7	24.6	-----	23.9	23.6	23.7	-----	26.8	26.5	26.3
19.4	19.4	19.7	-----	21.1	21.1	21.0	-----	20.9	20.0	19.8	-----	19.3	19.0	19.4	-----	23.6	23.1	23.2
10.0	10.3	10.3	9.3	10.1	11.4	11.6	8.6	9.4	10.0	10.2	8.4	9.6	9.7	9.8	10.0	10.4	10.4	10.6
10.2	8.0	8.0	-----	11.6	11.5	11.5	-----	12.4	10.7	10.9	-----	10.2	8.0	7.9	-----	10.8	9.9	9.9
3.5	3.7	2.7	2.7	4.5	4.7	4.7	1.8	3.1	3.5	2.7	1.9	3.6	2.8	2.2	1.9	3.5	3.3	2.2
6.8	7.4	7.5	-----	7.4	7.3	7.4	-----	6.9	7.3	5.9	-----	5.9	6.8	6.4	-----	7.6	8.1	7.2
4.6	5.8	4.9	-----	6.1	6.0	6.3	-----	2.8	5.4	2.3	-----	4.6	5.3	3.4	-----	4.1	5.0	4.9
13.6	13.6	13.5	-----	14.4	15.0	15.0	-----	14.6	13.8	13.8	-----	12.2	11.5	11.6	-----	13.0	12.5	12.6
12.6	13.7	13.6	-----	16.1	18.0	18.1	-----	15.0	14.8	14.8	-----	14.8	15.7	15.7	-----	16.1	16.4	16.4
14.6	16.4	16.0	-----	21.1	21.8	21.8	-----	16.4	16.8	16.9	-----	16.6	17.4	17.3	-----	17.9	18.6	18.8
13.5	13.7	13.8	-----	14.2	14.2	14.5	-----	13.4	14.7	14.6	-----	12.8	13.0	13.0	-----	13.7	13.8	13.8
9.8	8.7	8.3	5.9	10.0	9.3	9.3	5.8	10.1	9.3	9.2	5.4	9.5	8.1	7.9	5.5	9.8	8.6	8.4
76.9	78.9	78.9	66.7	92.3	99.6	98.6	52.8	67.1	67.2	67.6	43.3	63.7	63.8	64.0	44.2	59.3	59.6	59.6
37.2	42.8	43.9	36.7	42.4	51.2	52.0	29.4	36.4	41.7	42.9	29.3	38.2	41.6	43.5	33.0	39.8	44.4	45.2
19.6	18.5	17.9	-----	22.3	20.0	20.0	-----	20.3	18.5	18.0	-----	19.5	17.9	18.0	-----	18.1	15.3	15.5
16.2	15.7	15.4	-----	18.6	16.9	16.9	-----	17.9	14.8	14.8	-----	16.5	15.4	15.3	-----	17.5	15.8	16.1
39.4	38.5	39.0	-----	34.0	31.3	31.3	-----	[2]12.4	[2]11.6	[2]11.8	-----	36.9	35.6	33.0	-----	[2]11.0	[2]9.8	[2]9.6
47.6	41.6	42.3	-----	55.5	52.9	47.1	-----	50.2	40.4	40.7	-----	52.5	48.6	48.6	-----	49.1	40.1	39.3

[2] Per pound.

TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTI

Article	Unit	Houston, Tex.			Indianapolis, Ind.				Jacksonville, Fla.			
		Aug. 15, 1923	July 15, 1924	Aug. 15, 1924	Aug. 15—		July 15, 1924	Aug. 15, 1924	Aug. 15—		July 15, 1924	Aug. 15, 1924
					1913	1923			1913	1923		
		Cts.	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*
Sirloin steak	Pound	29.7	28.5	28.8	25.5	39.1	38.1	37.7	26.0	33.8	35.0	35.0
Round steak	do	28.8	27.3	28.5	24.7	38.3	36.9	36.1	22.0	27.5	28.9	28.9
Rib roast	do	24.6	22.9	22.9	18.2	26.4	27.1	26.9	23.3	26.0	26.7	27.0
Chuck roast	do	19.9	17.9	17.9	16.4	23.0	22.7	22.4	14.0	17.9	18.2	18.0
Plate beef	do	15.5	14.5	14.8	12.1	13.4	13.7	14.0	10.3	10.4	10.4	10.4
Pork chops	do	29.4	27.5	31.3	22.7	29.5	28.1	33.4	22.3	29.1	28.3	30.6
Bacon, sliced	do	45.8	40.9	41.8	31.0	37.8	32.1	33.4	30.3	34.5	33.5	33.8
Ham, sliced	do	45.6	43.8	45.0	31.2	49.7	47.1	47.7	28.7	41.9	41.7	43.9
Lamb, leg of	do	35.0	33.0	33.0	20.7	40.0	43.3	39.2	19.3	33.8	34.6	33.8
Hens	do	30.7	29.6	31.4	21.0	33.5	33.1	32.9	22.8	30.4	34.0	33.1
Salmon, canned, red	do	30.8	29.5	29.5	----	37.0	34.3	33.8	----	30.5	31.9	30.5
Milk, fresh	Quart	15.3	15.3	15.3	8.0	12.0	12.0	12.0	12.4	16.3	18.7	18.7
Milk, evaporated	15-16 oz. can	12.9	11.8	12.2	----	11.6	10.2	10.2	----	12.7	12.0	11.8
Butter	Pound	50.8	49.2	48.1	34.5	49.9	47.4	45.1	38.6	51.1	50.2	50.1
Oleomargarine	do	32.5	33.0	31.4	----	29.3	30.3	31.0	----	28.8	30.0	30.4
Nut margarine	do	29.2	30.0	30.5	----	27.4	28.8	29.8	----	27.2	28.3	28.0
Cheese	do	34.2	30.9	31.1	21.0	35.5	33.6	32.9	22.5	33.3	30.6	30.4
Lard	do	18.6	19.3	20.7	15.2	14.5	14.6	17.5	15.5	17.3	17.4	19.1
Vegetable lard substitute	do	17.3	18.0	19.6	----	24.0	25.0	25.3	----	23.3	23.3	23.6
Eggs, strictly fresh	Dozen	33.5	35.6	37.6	24.0	31.9	32.6	34.8	34.0	43.3	44.8	45.5
Bread	Pound	7.1	7.5	7.5	5.1	8.5	8.5	8.5	6.5	10.1	10.1	10.2
Flour	do	4.6	4.7	5.0	3.1	4.4	4.5	5.0	3.8	5.3	5.5	5.7
Corn meal	do	3.8	4.5	4.8	2.6	3.3	3.7	4.1	2.9	3.5	4.1	4.1
Rolled oats	do	8.8	9.1	9.2	----	7.7	7.6	7.7	----	9.2	8.8	9.2
Corn flakes	8-oz. pkg	9.7	9.8	9.8	----	8.9	8.9	9.0	----	9.7	9.6	9.6
Wheat cereal	28-oz. pkg	24.0	24.2	24.3	----	23.9	24.5	24.5	----	24.4	24.3	24.8
Macaroni	Pound	20.0	19.1	19.1	----	18.4	19.0	19.0	----	19.2	19.5	19.5
Rice	do	7.8	9.4	9.4	9.2	10.1	10.8	11.0	6.6	8.7	9.5	9.5
Beans, navy	do	10.7	10.5	10.6	----	9.6	8.6	8.4	----	11.5	11.1	10.9
Potatoes	do	4.7	4.1	4.2	2.2	3.8	3.5	2.3	2.6	5.3	4.1	3.7
Onions	do	6.0	6.0	6.6	----	7.2	7.5	6.5	----	7.3	7.4	7.5
Cabbage	do	5.4	4.9	5.1	----	4.9	4.5	3.9	----	6.3	5.8	5.3
Beans, baked	No. 2 can	13.2	13.1	13.1	----	13.4	13.1	13.0	----	11.5	11.5	11.5
Corn, canned	do	13.8	15.4	15.4	----	13.6	14.4	14.5	----	16.3	17.9	17.9
Peas, canned	do	18.8	18.5	18.8	----	16.0	16.0	16.0	----	16.8	18.7	19.2
Tomatoes, canned	do	12.1	12.1	12.7	----	14.0	14.3	14.3	----	11.5	11.1	11.3
Sugar, granulated	Pound	9.0	8.3	8.2	5.9	10.0	8.6	8.3	5.9	9.7	8.8	8.7
Tea	do	71.0	73.7	73.7	60.0	77.1	79.3	79.3	60.0	86.0	92.2	92.2
Coffee	do	32.8	36.5	39.3	30.0	38.2	43.9	44.6	34.5	38.7	42.0	44.5
Prunes	do	18.1	19.1	19.0	----	19.4	20.1	20.0	----	19.5	18.7	18.5
Raisins	do	17.4	16.1	16.0	----	18.5	16.9	16.9	----	18.9	17.0	17.0
Bananas	Dozen	30.5	29.5	29.5	----	32.3	30.8	30.0	----	32.5	30.0	26.3
Oranges	do	45.6	37.9	37.5	----	48.8	40.6	40.4	----	52.5	47.5	49.2

[1] The steak for which prices are here quoted is called "sirloin" in this city, but in most of the other cities included in this report it would be known as "porterhouse" steak.

CLES OF FOOD IN 51 CITIES ON SPECIFIED DATES—Continued

Kansas City, Mo.				Little Rock, Ark.				Los Angeles, Calif.				Louisville, Ky.				Manchester, N. H.			
Aug. 15—		July 15, 1924	Aug. 15, 1924	Aug. 15—		July 15, 1924	Aug. 15, 1924	Aug. 15—		July 15, 1924	Aug. 15, 1924	Aug. 15—		July 15, 1924	Aug. 15, 1924	Aug. 15—		July 15, 1924	Aug. 15, 1924
1913	1923			1913	1923			1913	1923			1913	1923			1913	1923		
Cts.	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*
24.4	38.5	38.1	38.3	26.3	34.1	33.2	33.9	24.0	33.9	34.9	35.2	23.2	32.8	33.3	33.3	[1]37.4	[1]59.8	[1]56.1	[1]56.6
22.3	33.5	32.5	33.3	20.6	31.1	30.3	30.3	21.0	27.6	28.8	29.1	20.0	29.7	29.6	30.0	30.6	49.6	45.4	45.3
18.0	25.8	26.3	26.5	20.0	26.2	25.0	25.4	19.6	28.3	28.9	29.3	18.3	23.4	25.2	25.3	20.8	30.1	28.5	27.9
15.3	18.6	19.2	19.6	16.3	19.4	18.4	18.8	15.8	17.3	19.6	19.3	15.6	17.5	18.8	18.1	17.2	23.4	22.6	22.0
12.3	10.8	11.2	11.1	13.5	14.4	14.8	14.8	12.3	12.3	13.6	13.2	13.1	13.2	14.2	14.2	----	16.5	16.1	15.7
20.9	29.5	26.8	35.7	22.5	30.1	29.7	33.5	25.4	36.3	35.8	29.5	20.6	26.7	25.6	30.8	21.4	32.3	29.9	34.6
31.3	41.9	38.7	40.5	38.0	41.6	37.4	39.6	33.8	48.5	47.4	48.2	29.7	33.4	30.2	33.5	23.6	33.7	30.9	32.4
30.6	46.7	45.3	47.2	30.6	46.9	45.0	47.6	36.7	57.5	57.9	58.9	30.0	41.3	41.5	43.6	30.0	40.8	38.9	40.4
18.7	33.3	37.4	36.5	20.0	36.3	37.9	38.7	18.8	33.1	33.3	32.8	17.1	35.0	37.0	34.6	21.0	37.4	39.0	37.9
16.9	29.3	31.8	31.2	18.3	27.4	28.4	27.3	26.8	38.5	38.3	38.1	22.9	29.9	37.4	30.4	24.4	42.4	41.9	41.5
----	32.9	33.8	33.9	----	31.5	30.9	31.2	----	38.5	37.3	36.8	----	29.2	29.8	29.0	----	29.8	29.9	30.0
9.1	13.3	13.3	13.0	10.0	15.3	15.7	15.7	10.0	15.0	17.0	17.0	8.8	13.0	12.0	12.0	8.0	13.8	12.0	13.0
----	12.1	11.5	11.6	----	13.3	12.1	12.0	----	10.6	10.1	10.1	----	12.2	12.3	11.9	----	13.9	12.9	13.0
35.4	50.3	47.4	43.6	39.0	50.6	47.8	48.1	39.5	56.9	50.4	51.3	36.4	50.0	49.1	47.6	37.6	54.8	52.4	51.2
----	27.4	28.0	27.9	----	31.0	31.4	31.6	----	32.8	34.2	33.8	----	29.0	29.5	30.0	----	29.2	28.8	29.3
----	27.6	27.8	28.3	----	28.2	29.1	29.1	----	28.4	28.5	29.3	----	26.6	30.2	30.8	----	22.3	22.7	22.7
21.8	37.0	34.7	34.7	23.3	36.4	33.5	33.3	19.5	36.4	37.0	36.8	21.7	34.0	31.6	31.8	21.0	37.3	35.5	35.8
16.4	17.4	17.3	19.9	16.3	18.8	18.8	20.9	17.9	19.0	19.0	20.4	16.1	14.3	15.2	18.5	16.2	17.2	16.8	19.1
----	23.8	25.7	26.1	----	21.0	20.7	22.2	----	22.5	24.5	25.5	----	23.5	27.3	26.7	----	20.5	23.4	23.8
25.3	33.5	34.5	37.4	28.3	37.2	34.6	38.5	39.0	45.0	42.1	45.5	25.0	34.1	32.9	35.7	35.6	53.8	45.1	55.9
6.0	7.9	8.3	8.4	6.0	8.1	8.0	8.0	6.0	9.0	9.3	8.7	5.7	8.4	8.4	8.5	6.1	8.3	8.3	8.3
3.0	4.2	4.4	4.8	3.5	4.7	5.1	5.3	3.6	4.5	4.5	4.8	3.4	4.8	5.1	5.6	3.4	4.8	5.0	5.3
2.7	4.5	4.8	5.0	2.5	3.3	3.8	4.3	3.3	4.2	4.3	5.0	2.3	2.9	3.5	4.4	3.6	4.7	4.6	5.0
----	8.5	9.0	8.9	----	10.3	9.2	9.4	----	9.6	9.3	9.3	----	8.4	8.7	8.7	----	8.5	8.6	8.6
----	10.2	9.9	9.9	----	9.7	9.6	9.5	----	9.5	9.8	9.8	----	9.1	9.1	9.1	----	9.9	9.8	9.8
----	25.2	25.2	25.2	----	25.1	24.7	24.9	----	23.2	23.3	22.8	----	23.6	24.3	24.6	----	25.1	24.5	24.5
----	21.5	22.0	21.7	----	20.9	20.0	19.8	----	15.6	15.7	16.1	----	16.6	16.9	16.7	----	24.9	24.1	24.3
8.7	9.5	9.7	9.9	8.3	7.8	9.1	9.6	7.7	9.5	9.9	10.7	8.1	8.4	10.2	10.3	8.8	9.2	9.8	9.9
----	10.7	9.6	9.7	----	11.1	9.9	10.2	----	9.7	9.4	9.5	----	9.7	8.1	8.7	----	10.5	9.4	9.9
1.9	2.3	2.4	1.9	2.0	3.8	2.9	3.2	1.8	3.4	3.4	3.5	1.9	3.0	2.2	1.8	1.9	4.3	3.2	2.2
----	6.9	7.1	6.3	----	7.4	6.9	7.1	----	6.0	5.3	5.2	----	4.7	5.6	5.1	----	7.0	8.0	6.9
----	4.4	3.0	3.0	----	6.3	5.4	4.8	----	3.8	5.6	6.3	----	4.7	4.0	3.8	----	4.8	7.6	5.7
----	14.2	14.0	14.0	----	13.2	12.8	12.2	----	13.0	12.6	12.5	----	11.3	11.9	11.5	----	14.5	14.1	14.2
----	14.0	14.7	14.5	----	15.3	14.6	15.2	----	15.9	15.5	15.5	----	13.5	15.5	15.5	----	17.5	18.3	18.3
----	15.4	16.5	15.9	----	18.7	18.8	18.9	----	18.4	18.1	18.1	----	15.5	16.8	16.8	----	20.9	21.2	21.2
----	13.7	13.9	14.0	----	13.2	12.7	12.9	----	[2]14.9	[2]14.3	[2]14.3	----	11.7	12.3	12.5	----	[3]20.9	[3]20.4	[3]20.5
5.7	9.8	8.9	8.8	5.8	10.3	9.0	8.9	5.6	9.5	8.4	8.2	5.5	9.8	8.6	8.1	5.6	10.0	8.5	8.2
54.0	79.6	79.2	79.5	50.0	90.4	88.8	88.5	54.5	69.4	69.1	69.1	62.5	71.5	72.6	72.6	47.0	57.7	59.2	59.2
27.8	39.4	44.9	45.6	30.8	40.9	44.8	46.2	36.3	38.9	46.2	48.3	27.5	36.3	40.1	42.3	32.0	39.6	45.1	45.7
----	18.9	18.7	18.1	----	20.6	17.8	18.0	----	18.8	15.9	16.5	----	18.4	16.0	16.0	----	18.4	16.4	16.5
----	19.7	16.1	16.4	----	19.7	17.5	18.3	----	17.2	13.3	12.8	----	17.3	14.6	14.8	----	16.2	14.4	14.5
----	[4]13.2	[4]10.2	[4]9.9	----	[4]10.2	[4]8.8	[4]8.8	----	[4]11.8	[4]10.4	[4]10.0	----	38.1	37.0	38.0	----	[4]12.2	[4]9.8	[4]9.6
----	48.2	46.1	45.4	----	48.7	42.6	43.8	----	37.0	42.5	39.4	----	42.2	40.0	39.4	----	50.7	46.1	48.7

[1] No. 2½ can. [3] No. 3 can. [4] Per pound.

TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTI

Article	Unit	Memphis, Tenn.				Milwaukee, Wis.				Minneapolis, Minn.			
		Aug. 15—		July 15, 1924	Aug. 15, 1924	Aug. 15—		July 15, 1924	Aug. 15, 1924	Aug. 15—		July 15, 1924	Aug. 15, 1924
		1913	1923			1913	1923			1913	1923		
		Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
Sirloin steak	Pound	22.9	35.4	32.9	32.5	22.6	39.7	38.6	39.2	24.2	34.2	33.9	33.0
Round steak	do	19.1	31.5	28.8	28.6	21.2	35.2	33.3	33.7	21.7	30.8	30.2	29.8
Rib roast	do	21.5	26.5	25.2	24.8	18.8	27.2	27.5	28.1	21.0	26.2	26.6	26.8
Chuck roast	do	15.6	19.6	18.1	17.5	16.4	21.7	22.4	22.8	17.0	19.9	20.9	20.1
Plate beef	do	11.9	13.5	13.4	13.1	12.0	11.7	12.6	12.9	10.3	9.9	10.9	10.4
Pork chops	do	20.0	27.4	25.0	27.8	20.2	33.3	28.7	35.9	20.0	30.8	28.6	32.9
Bacon, sliced	do	32.1	37.1	31.8	33.6	28.6	41.1	36.7	39.9	27.7	41.5	38.3	39.9
Ham, sliced	do	30.7	43.8	42.5	41.7	29.0	45.0	42.7	45.3	32.7	46.9	43.4	45.6
Lamb, leg of	do	20.1	37.3	36.8	36.1	20.5	38.2	38.1	36.9	14.4	34.0	36.3	34.3
Hens	do	20.0	28.1	28.7	28.2	19.8	31.5	30.1	30.1	18.5	28.8	30.0	29.3
Salmon, canned, red	do		35.6	36.9	37.5		35.2	35.2	34.9		36.4	37.4	36.9
Milk, fresh	Quart	10.0	15.0	14.7	14.7	7.0	11.0	11.0	11.0	7.0	12.0	10.0	11.0
Milk, evaporated	15–16 oz. can		12.9	11.3	11.1		11.7	10.9	10.9		12.6	11.5	11.1
Butter	Pound	37.0	48.7	44.9	44.1	32.2	49.3	45.9	44.6	31.4	47.0	44.8	43.1
Oleomargarine	do		31.7	27.5	27.5		26.9	27.3	28.2		27.5	28.3	28.4
Nut margarine	do		25.2	23.7	24.3		25.6	26.7	27.1		25.6	25.5	25.9
Cheese	do	20.8	33.5	28.8	29.2	21.3	34.9	30.8	32.1	20.8	35.2	31.6	31.4
Lard	do	16.5	15.6	14.8	17.5	16.3	17.5	18.0	20.0	15.6	17.0	16.7	18.9
Vegetable lard substitute	do		22.4	24.0	23.6		23.6	25.2	25.6		24.8	27.4	27.4
Eggs, strictly fresh	Dozen	29.3	34.3	34.4	36.4	26.2	32.4	32.0	37.9	25.3	31.8	31.4	35.4
Bread	Pound	6.0	8.9	9.1	9.1	5.6	8.9	9.2	9.2	5.6	9.0	8.9	8.9
Flour	do	3.4	4.9	5.3	5.5	3.1	4.0	4.4	4.7	3.0	4.4	4.9	5.1
Corn meal	do	2.2	3.2	4.0	4.0	3.3	3.8	4.4	4.5	2.4	3.8	4.1	4.4
Rolled oats	do		9.3	9.2	9.2		7.2	8.1	8.4		8.8	8.1	8.1
Corn flakes	8-oz. pkg		9.7	9.5	9.5		9.1	9.2	9.2		10.2	9.9	10.1
Wheat cereal	28-oz. pkg		24.4	24.4	24.1		24.3	24.0	24.1		24.4	24.1	24.0
Macaroni	Pound		17.5	18.6	18.3		17.4	17.2	17.4		17.4	17.2	17.2
Rice	do	7.5	7.9	9.0	9.2	9.0	10.4	10.3	10.4	9.1	9.3	9.7	9.9
Beans, navy	do		10.9	9.1	9.2		11.0	8.9	9.1		11.1	9.3	9.3
Potatoes	do	2.1	3.8	3.2	3.0	1.5	2.8	3.1	2.3	1.0	1.6	3.2	1.4
Onions	do		5.0	5.3	5.3		6.4	7.4	7.1		6.9	7.4	7.4
Cabbage	do		4.2	4.1	3.7		3.4	5.5	3.7		3.6	5.2	3.0
Beans, baked	No. 2 can		13.0	12.8	12.4		11.6	11.6	11.7		13.9	13.8	13.6
Corn, canned	do		15.4	14.3	14.4		15.2	15.7	15.7		13.3	13.8	13.8
Peas, canned	do		18.3	18.3	18.7		15.5	16.7	16.7		16.1	16.4	16.5
Tomatoes, canned	do		13.2	13.0	12.8		13.8	14.2	14.3		14.8	14.6	14.9
Sugar, granulated	Pound	5.7	9.8	8.5	8.3	5.5	9.3	8.0	7.8	5.8	9.3	8.6	8.5
Tea	do	63.8	85.3	83.3	83.9	50.0	79.3	69.9	70.2	45.0	65.3	64.7	64.7
Coffee	do	27.5	37.7	40.5	40.6	27.5	34.4	39.1	39.5	30.8	42.0	45.7	45.8
Prunes	do		19.5	15.7	15.3		19.6	17.6	17.4		19.8	17.8	17.4
Raisins	do		19.3	16.5	16.2		17.2	15.6	15.2		17.8	15.5	15.4
Bananas	Dozen		35.0	32.2	30.0		[3] 11.0	[3] 9.4	[3] 9.7		[3] 12.6	[3] 10.6	[3] 10.5
Oranges	do		49.7	49.1	46.9		50.9	40.6	46.0		53.4	48.8	50.2

[1] Whole. [2] No. 3 can. [3] Per pound.

CLES OF FOOD IN 61 CITIES ON SPECIFIED DATES—Continued

Mobile, Ala.			Newark, N. J.				New Haven, Conn.				New Orleans, La.				New York, N. Y.			
Aug. 15, 1923	July 15, 1924	Aug. 15, 1924	Aug. 15—		July 15, 1924	Aug. 15, 1924	Aug. 15—		July 15, 1924	Aug. 15, 1924	Aug. 15—		July 15, 1924	Aug. 15, 1924	Aug. 15—		July 15, 1924	Aug 15, 1924
			1913	1923			1913	1923			1913	1923			1913	1923		
Cts.	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*
32.1	30.0	29.5	29.2	47.8	46.6	46.5	32.8	54.1	51.9	51.8	21.9	32.4	33.0	33.0	26.8	45.5	43.8	44.0
30.8	28.6	28.6	28.4	44.5	43.8	44.2	30.4	44.2	42.5	42.4	18.9	29.1	29.3	28.8	26.1	43.7	42.0	42.7
26.3	24.4	24.1	21.2	36.5	35.5	35.6	24.2	36.8	35.0	34.8	19.4	27.6	28.0	28.4	21.9	37.5	37.1	37.0
19.8	20.0	20.0	18.8	25.0	24.5	23.8	20.0	28.1	25.6	25.8	14.5	19.4	18.8	19.3	16.3	23.2	23.0	23.5
15.0	14.8	14.7	12.0	12.9	12.8	13.2	.....	14.8	14.4	14.0	11.0	14.1	15.0	14.8	14.9	18.2	18.8	19.1
33.8	32.3	34.1	24.2	33.5	30.7	35.2	23.4	32.8	30.1	36.0	23.8	31.2	28.8	33.6	22.2	34.6	32.8	36.4
39.8	34.9	36.2	26.4	38.5	35.9	37.4	29.3	40.3	36.4	37.8	33.1	39.7	36.1	38.3	26.4	38.1	36.0	37.4
44.1	41.9	41.9	[1]22.2	[1]29.2	[1]25.9	[1]27.8	34.0	53.7	50.6	52.7	31.3	42.5	42.5	45.2	30.0	52.0	49.5	51.1
35.6	35.0	34.0	20.0	39.7	40.2	38.8	19.2	40.4	40.4	39.3	21.3	39.5	38.9	39.4	15.8	36.2	38.0	35.4
33.3	34.2	34.2	24.0	36.2	37.5	37.5	24.0	39.3	40.5	39.8	21.7	35.5	34.1	33.2	22.0	36.2	37.2	36.9
28.8	28.4	28.4	.....	27.3	28.1	28.3	.....	34.2	31.3	31.3	.....	40.8	41.7	40.8	.....	28.9	28.5	28.8
15.0	20.0	20.0	9.0	15.5	14.5	14.5	9.0	15.0	15.0	15.0	9.3	14.0	14.0	14.0	9.0	14.0	13.0	13.0
13.0	11.1	11.0	.....	11.9	10.7	10.6	.....	12.5	11.7	11.5	.....	11.9	10.5	10.4	.....	11.8	10.4	10.3
52.4	49.4	49.1	35.8	52.8	51.9	50.9	34.0	50.9	49.1	48.2	34.0	50.7	50.0	49.0	34.3	52.0	50.3	49.5
29.8	31.7	32.3	.....	29.4	31.3	31.7	.....	31.0	32.3	32.5	.....	29.5	30.4	32.0	.....	29.2	30.8	31.2
27.5	29.1	28.8	.....	26.9	27.5	28.8	.....	28.0	29.3	29.8	.....	28.0	27.8	28.7	.....	26.4	27.9	28.3
35.4	31.6	32.4	24.3	39.8	40.3	38.8	22.0	36.9	36.4	36.3	22.0	35.2	31.5	31.5	19.4	38.3	37.1	36.5
16.8	16.7	19.0	16.5	16.8	17.3	19.1	15.8	16.8	17.0	19.3	15.4	16.1	16.3	18.9	16.2	17.9	17.9	19.5
19.4	19.5	21.3	.....	22.4	25.2	25.2	.....	22.3	24.3	25.1	.....	22.2	21.4	22.1	.....	23.6	25.6	25.6
35.8	38.3	40.3	42.2	54.8	47.9	54.5	42.6	57.9	48.5	55.8	30.4	35.9	39.2	41.5	38.6	52.3	48.7	54.9
8.7	8.8	9.0	5.6	8.5	8.6	8.6	6.0	8.0	8.1	8.1	5.1	7.6	7.7	7.9	6.1	9.6	9.5	9.5
5.0	5.0	5.3	3.7	4.5	4.9	5.0	3.3	4.4	4.9	5.3	3.7	5.3	5.4	5.6	3.3	4.7	5.0	5.3
3.6	4.1	4.2	3.6	6.0	6.3	6.3	3.2	5.8	5.9	5.9	2.8	8.6	3.9	4.1	3.4	5.2	5.5	5.5
8.5	8.5	8.6	.....	8.3	8.2	8.1	.....	8.6	8.9	8.9	.....	8.6	8.6	8.6	.....	8.2	8.8	8.7
9.3	9.3	9.3	.....	8.9	8.8	8.9	.....	9.5	9.6	9.7	.....	9.3	9.4	9.3	.....	8.7	8.8	8.8
23.6	23.5	23.5	.....	23.5	23.5	23.6	.....	23.4	23.4	23.4	.....	23.9	24.0	24.0	.....	22.8	22.6	22.6
20.1	19.8	19.8	.....	21.2	20.9	20.9	.....	22.7	22.5	22.4	.....	8.8	9.3	9.2	.....	20.3	20.1	20.2
8.6	9.2	9.4	9.0	9.3	9.7	9.8	9.3	9.6	10.5	10.6	7.4	8.8	9.5	9.7	8.0	9.2	9.6	9.9
11.8	9.8	10.1	.....	10.9	9.3	9.4	.....	10.7	9.5	9.5	.....	10.0	9.0	9.1	.....	11.7	10.5	10.5
4.1	2.9	2.9	2.6	4.4	3.3	2.8	2.1	4.0	3.3	2.5	2.2	3.8	3.0	3.1	2.4	4.1	3.7	2.9
6.4	6.7	6.9	.....	6.9	7.5	6.7	.....	7.2	7.3	6.4	.....	5.0	5.2	5.9	.....	6.7	7.4	7.0
5.2	4.2	4.5	.....	6.4	5.3	4.3	.....	5.3	5.3	4.1	.....	4.4	4.6	4.3	.....	5.9	3.7	4.0
12.2	11.9	11.6	.....	10.9	11.4	11.4	.....	12.1	11.9	12.1	.....	12.8	12.2	12.2	.....	11.9	11.8	11.8
15.6	15.7	15.2	.....	14.4	14.9	14.9	.....	18.4	17.7	17.7	.....	13.1	13.8	13.8	.....	15.3	15.7	15.9
15.7	16.5	16.8	.....	17.1	18.2	18.2	.....	20.9	20.5	20.5	.....	17.4	16.9	16.9	.....	17.0	18.2	18.0
12.2	11.8	11.5	.....	11.9	11.9	11.8	.....	[2]21.8	[2]21.9	[2]21.9	.....	11.7	11.5	11.5	.....	11.8	11.9	12.8
9.6	8.6	8.3	5.3	9.1	7.8	7.9	5.4	9.7	8.4	8.0	5.3	8.9	7.7	7.6	5.0	9.0	7.4	7.3
73.9	75.5	75.7	53.8	54.9	57.2	56.6	55.0	56.9	59.9	59.9	62.1	69.9	71.7	71.7	43.3	57.3	59.8	60.2
37.2	40.9	42.2	29.3	35.5	40.7	42.2	33.8	39.8	45.2	45.5	26.4	31.1	35.8	37.7	27.2	34.5	40.2	41.2
23.3	17.0	16.4	.....	15.7	15.3	15.1	.....	18.3	16.3	16.1	.....	19.3	18.1	18.0	.....	17.1	15.9	15.8
20.0	16.5	16.3	.....	15.4	15.3	15.1	.....	16.2	15.0	15.0	.....	18.1	15.2	15.1	.....	15.9	15.6	15.7
31.3	27.5	26.3	.....	39.3	35.6	35.6	.....	33.8	34.6	33.2	.....	23.0	19.0	20.0	.....	42.5	37.3	35.9
51.8	35.5	39.4	.....	61.9	52.3	51.7	.....	48.2	44.8	46.9	.....	50.6	38.0	37.2	.....	56.1	56.7	53.8

TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTI

Article	Unit	Norfolk, Va.			Omaha, Nebr.				Peoria, Ill.		
		Aug. 15, 1923	July 15, 1924	Aug. 15, 1924	Aug. 15—		July 15, 1924	Aug. 15, 1924	Aug. 15, 1923	July 15, 1924	Aug. 15, 1924
					1913	1923					
		Cts.	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*
Sirloin steak	Pound	42.6	42.9	42.6	25.4	37.4	37.1	37.6	35.1	36.1	35.7
Round steak	do	36.5	35.1	34.8	22.8	34.6	33.7	34.3	34.4	33.4	33.4
Rib roast	do	34.1	31.8	32.9	19.0	25.5	26.7	26.1	24.1	23.6	23.6
Chuck roast	do	21.5	21.7	21.3	16.2	21.2	20.6	20.7	20.5	20.7	20.7
Plate beef	do	14.3	14.8	14.7	11.8	10.0	10.4	10.5	12.8	12.4	12.3
Pork chops	do	30.1	29.3	30.2	20.4	30.0	28.8	33.8	29.9	27.6	32.9
Bacon, sliced	do	34.5	30.9	31.7	28.6	45.0	40.8	41.9	41.4	40.3	41.9
Ham, sliced	do	41.2	37.7	39.3	30.0	50.6	47.1	48.0	45.7	45.0	47.1
Lamb, leg of	do	39.9	39.0	39.0	18.0	37.3	40.3	41.3	36.1	36.7	36.9
Hens	do	35.8	33.7	33.6	16.4	28.6	30.3	30.1	30.6	32.2	31.9
Salmon, canned, red	do	28.8	28.9	29.0	.....	33.7	32.8	32.9	32.7	31.6	31.6
Milk, fresh	Quart	17.0	17.0	17.0	8.2	12.2	11.5	11.5	11.6	12.0	12.0
Milk, evaporated	15–16 oz. can	11.4	10.2	10.2	.....	11.9	11.2	11.2	12.0	11.3	11.3
Butter	Pound	53.1	50.3	50.2	33.0	48.2	45.5	44.3	49.3	45.3	43.9
Oleomargarine	do	28.3	30.0	30.0	.....	28.8	29.4	29.9	29.4	29.8	30.8
Nut margarine	do	26.8	25.3	26.5	.....	28.6	28.8	28.7	27.0	28.6	29.1
Cheese	do	32.8	29.7	31.3	22.9	35.3	32.0	32.8	35.3	33.9	33.2
Lard	do	16.1	15.1	18.4	17.8	18.9	18.8	20.9	17.0	17.3	19.4
Vegetable lard substitute	do	17.8	19.0	20.4	.....	24.1	25.7	26.7	24.4	27.4	27.3
Eggs, strictly fresh	Dozen	38.9	37.8	40.1	23.3	31.5	32.3	35.1	30.0	30.7	32.9
Bread	Pound	7.8	7.9	8.0	5.2	9.8	9.4	9.4	8.0	8.6	8.6
Flour	do	4.5	4.5	4.9	2.7	3.9	4.1	4.1	4.5	4.8	5.1
Corn meal	do	3.7	3.7	4.1	2.4	3.7	4.2	4.3	3.7	4.2	4.5
Rolled oats	do	8.0	7.7	7.8	.....	9.9	9.9	10.0	9.4	8.9	9.0
Corn flakes	8-oz. pkg	9.3	9.1	9.1	.....	10.3	10.1	10.1	10.0	10.0	10.0
Wheat cereal	28-oz. pkg	23.8	23.1	23.2	.....	23.9	24.4	24.3	26.2	25.2	25.2
Macaroni	Pound	19.8	19.7	19.7	.....	20.0	20.3	20.2	19.9	19.5	19.5
Rice	do	9.9	9.9	10.4	8.5	8.8	9.1	9.2	9.6	10.0	9.7
Beans, navy	do	10.8	9.0	9.3	.....	11.7	9.8	9.8	10.9	9.0	9.0
Potatoes	do	4.1	2.8	2.6	1.7	2.2	2.9	1.9	2.9	3.2	2.4
Onions	do	6.4	7.1	6.7	.....	6.9	7.0	7.0	7.4	8.3	7.7
Cabbage	do	4.8	3.8	4.3	.....	4.3	3.4	2.7	4.2	3.6	2.8
Beans, baked	No. 2 can	9.8	9.9	9.9	.....	15.2	14.6	14.8	12.9	12.7	12.4
Corn, canned	do	15.7	15.6	15.6	.....	16.3	15.7	15.9	14.4	14.7	14.5
Peas, canned	do	18.8	18.4	18.4	.....	17.3	16.8	17.1	17.0	18.7	18.7
Tomatoes, canned	do	11.3	12.3	12.6	.....	14.6	14.9	15.1	14.1	14.9	14.8
Sugar, granulated	Pound	8.6	7.6	7.6	6.1	9.9	8.7	8.7	10.4	9.0	8.9
Tea	do	82.1	76.5	79.7	56.0	75.2	77.2	77.0	60.4	62.5	62.5
Coffee	do	38.0	39.6	40.7	30.0	41.1	46.7	47.0	36.7	42.0	44.1
Prunes	do	18.2	14.4	14.8	.....	20.9	17.5	18.4	20.9	21.1	20.8
Raisins	do	17.1	14.6	15.0	.....	20.2	17.6	17.6	19.4	16.7	16.7
Bananas	Dozen	36.3	35.0	35.0	.....	[1] 12.5	[1] 10.0	[1] 10.2	[1] 12.1	[1] 10.0	[1] 10.0
Oranges	do	55.0	42.5	48.1	.....	49.5	39.0	38.2	46.2	43.6	41.7

[1] The steak for which prices are here quoted is called "sirloin" in this city, but in most of the other cities included in this report it would be known as "porterhouse" steak.

CLES OF FOOD IN 51 CITIES ON SPECIFIED DATES—Continued

Philadelphia, Pa.				Pittsburgh, Pa.				Portland, Me.			Portland, Oreg.				Providence, R. I.			
Aug. 15—		July 15, 1924	Aug. 15, 1924	Aug. 15—		July 15, 1924	Aug. 15, 1924	Aug. 15, 1923	July 15, 1924	Aug. 15, 1924	Aug. 15—		July 15, 1924	Aug. 15, 1924	Aug. 15—		July 15, 1924	Aug. 15, 1924
1913	1923			1913	1923						1913	1923			1913	1923		
Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
[1] 32.3	[1] 53.2	[1] 51.8	[1] 52.9	28.0	46.4	46.4	46.2	[1] 60.5	[1] 59.4	[1] 60.5	23.9	28.1	29.1	28.5	[1] 40.2	[1] 70.0	[1] 70.6	[1] 70.5
27.5	43.0	40.9	41.5	24.8	38.2	37.7	37.6	47.5	46.5	46.9	21.4	24.8	25.6	25.4	31.6	50.6	47.4	47.3
22.5	34.5	34.3	34.2	22.5	32.0	32.8	33.0	29.1	30.2	30.3	19.9	24.2	24.1	23.7	24.2	38.3	37.7	37.6
18.4	21.8	22.4	22.0	17.3	21.3	22.6	22.7	20.2	19.9	20.7	16.4	16.1	16.6	16.3	18.8	28.8	28.0	27.6
12.3	10.2	11.2	11.0	12.3	11.0	11.1	11.5	15.2	15.0	16.0	13.6	11.9	12.1	11.7	-----	17.9	18.4	18.4
22.4	34.5	35.0	38.1	23.5	34.6	33.4	37.8	32.5	30.9	36.2	24.4	29.9	28.9	34.2	21.6	36.5	34.3	40.0
28.2	36.9	33.6	36.4	30.1	41.7	41.2	42.0	37.7	35.1	36.8	31.5	45.3	41.4	43.6	23.4	36.7	34.3	35.1
32.6	53.4	50.9	52.7	31.6	54.4	54.3	54.6	47.7	47.1	49.6	31.2	47.2	46.1	48.3	33.3	53.4	52.3	54.9
20.2	39.6	40.6	39.7	19.7	38.8	41.2	40.5	40.2	39.7	38.9	17.2	32.4	33.1	32.5	18.7	43.0	42.4	40.2
23.1	38.1	38.0	37.7	26.0	40.1	41.6	40.9	40.8	40.5	40.4	20.7	31.3	32.7	31.4	24.8	40.2	41.1	40.5
-----	26.2	25.8	25.8	-----	28.9	28.0	27.8	27.9	27.6	27.7	-----	35.0	37.1	38.2	-----	31.0	30.3	30.4
8.0	13.0	12.0	12.0	8.6	14.0	14.0	14.0	14.0	13.8	13.8	9.3	12.6	11.7	11.7	9.0	15.0	13.2	13.8
-----	12.2	11.4	11.4	-----	12.1	10.8	10.6	13.6	12.2	12.3	-----	12.0	11.0	11.1	-----	12.4	11.3	11.4
39.4	56.5	54.2	52.8	35.6	52.3	50.7	49.0	55.2	53.4	52.4	39.5	52.9	46.0	46.7	36.0	52.0	50.2	48.9
-----	29.3	29.9	31.1	-----	27.8	29.8	30.0	30.6	32.0	31.7	-----	29.3	28.4	28.8	-----	30.0	30.0	30.0
-----	27.4	27.7	29.0	-----	26.4	27.4	28.0	27.5	27.6	27.7	-----	27.6	29.2	29.5	-----	28.0	28.5	29.0
25.0	38.4	36.9	36.6	24.5	37.2	37.0	36.2	39.1	35.8	35.9	20.8	37.1	36.9	37.1	21.7	35.9	35.1	34.6
15.6	16.0	16.3	18.6	158–	15.1	15.3	18.2	17.2	16.7	18.8	18.6	19.3	18.8	20.2	15.7	16.6	16.9	19.2
-----	23.0	25.1	25.2	-----	23.5	25.1	25.2	22.6	23.6	23.3	-----	24.7	28.0	28.2	-----	23.2	25.5	25.8
34.3	43.3	40.0	44.0	28.9	40.1	40.6	44.9	53.3	45.4	56.6	33.8	40.1	36.1	39.9	38.4	57.9	50.5	63.5
4.8	8.4	8.5	8.5	5.4	8.5	8.5	8.5	9.3	9.3	9.3	5.6	9.2	9.5	9.5	5 9	8.8	8.8	8.8
3.2	4.6	4.8	5.1	3.2	4.3	4.7	4.9	4.6	4.8	5.1	2.9	4.3	4.3	4.5	3.5	4.8	5.5	5.7
2.7	3.7	4.1	4.2	2.8	4.1	5.1	4.9	4.5	4.7	4.9	3.3	3.6	3.8	4.0	2.8	4.0	4.5	4.5
-----	8.3	8.1	8.0	-----	9.0	9.1	9.1	7.0	6.9	6.9	-----	9.4	10.1	10.2	-----	9.3	9.3	9.3
-----	8.9	8.8	8.8	-----	9.6	9.4	9.6	9.7	9.7	9.7	-----	11.4	11.4	11.2	-----	9.7	9.7	9.7
-----	23.9	23.5	23.5	-----	25.1	24.3	24.2	24.5	24.8	24.6	-----	25.7	26.4	26.4	-----	24.1	24.1	24.1
-----	20.5	20.3	20.3	-----	21.8	21.7	21.9	23.1	24.3	24.6	-----	18.4	18.2	18.5	-----	22.1	23.4	23.3
9.8	10.3	10.7	10.9	9.2	9.9	10.0	10.4	10.7	11.0	10.9	8.6	9.2	10.2	10.4	9.3	9.6	9.9	10.0
-----	11.3	9.9	9.9	-----	10.7	9.1	9.1	11.1	9.9	9.9	-----	9.9	9.8	9.8	-----	10.6	9.8	9.8
2.1	4.4	3.2	2.5	1.9	4.2	3.0	2.3	4.2	3.2	2.3	1.3	2.1	4.0	3.1	2.0	4.0	3.1	2.4
-----	6.4	6.8	6.2	-----	6.7	7.7	7.1	6.3	7.8	6.5	-----	4.1	4.7	4.8	-----	6.3	7.4	6.4
-----	4.6	4.1	3.5	-----	5.0	5.3	4.5	4.1	5.7	4.6	-----	3.1	4.8	4.8	-----	4.2	4.8	4.4
-----	11.1	11.2	11.2	-----	12.6	13.0	13.0	15.7	15.3	15.3	-----	15.2	14.7	14.4	-----	12.4	11.9	12.1
-----	14.7	14.8	14.9	-----	15.0	16.1	15.7	16.2	17.1	17.4	-----	17.4	18.9	19.2	-----	17.0	17.7	17.7
-----	16.7	16.2	16.2	-----	16.3	17.6	17.5	20.4	20.3	20.3	-----	17.0	19.4	19.3	-----	20.0	20.1	20.2
-----	12.4	12.2	12.4	-----	12.8	13.5	3.6	[2] 22.5	[2] 22.6	[2] 22.9	-----	[3] 16.2	[3] 16.4	[3] 16.4	-----	13.7	13.0	13.0
5.0	9.2	7.6	7.5	5.7	9.7	8.6	8.4	9.6	8.2	8.1	6.4	9.8	9.1	9.1	5.2	9.7	7.9	7.9
54.0	58.9	61.1	61.1	58.0	75.1	78.2	78.1	57.5	61.6	61.1	55.0	65.7	71.9	72.2	48.3	61.1	58.5	58.5
24.5	31.8	36.5	37.8	30.0	37.7	42.5	43.8	41.4	47.9	47.9	35.0	37.1	44.9	45.3	30.0	41.6	47.0	47.3
-----	16.8	15.9	16.2	-----	20.1	19.4	18.8	17.8	16.5	16.4	-----	13.0	10.0	10.7	-----	19.3	18.1	17.6
-----	16.4	14.8	15.0	-----	16.5	14.7	14.5	15.5	13.9	13.9	-----	17.5	13.9	14.1	-----	16.9	15.0	15.1
-----	32.9	31.1	30.0	-----	44.7	40.3	37.9	[4] 11.8	[4] 10.2	[4] 9.9	-----	[4] 15.4	[4] 16.0	[4] 15.8	-----	37.3	32.9	33.6
-----	48.5	44.8	46.8	-----	53.1	48.1	49.5	56.7	48.1	50.3	-----	50.7	41.3	39.8	-----	59.2	53.0	53.4

[2] No. 3 can. [3] No. 2½ can. [4] Per pound.

TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTI

Article	Unit	Richmond, Va.				Rochester, N. Y.			St. Louis, Mo.			
		Aug. 15—		July 15, 1924	Aug. 15, 1924	Aug. 15, 1923	July 15, 1924	Aug. 15, 1924	Aug. 15—		July 15, 1924	Aug 15, 1924
		1913	1923						1913	1923		
		Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
Sirloin steak	Pound	22.6	39.4	40.1	39.8	41.5	41.2	41.4	25.6	35.2	35.6	36.0
Round steak	do	20.0	34.8	34.1	34.2	34.8	34.5	34.3	24.7	33.1	33.5	33.7
Rib roast	do	19.3	30.2	30.7	30.2	29.5	29.8	29.8	19.6	27.4	28.5	28.8
Chuck roast	do	15.9	21.7	21.9	22.1	22.9	23.5	23.3	15.3	17.4	18.8	19.2
Plate beef	do	12.9	15.4	15.4	15.0	11.5	12.0	11.7	11.5	10.9	11.9	11.9
Pork chops	do	21.2	32.2	31.2	33.5	35.2	34.5	38.0	20.8	28.2	26.6	32.5
Bacon, sliced	do	27.0	33.5	30.8	34.1	34.7	33.5	34.8	28.0	38.5	35.4	37.0
Ham, sliced	do	26.0	39.2	36.9	39.6	47.2	45.8	46.8	28.3	42.6	42.5	44.3
Lamb, leg of	do	19.3	41.4	45.7	43.8	37.8	40.5	39.0	19.0	34.3	37.6	35.0
Hens	do	19.4	34.7	34.2	34.2	38.8	39.5	39.5	17.4	29.3	30.6	29.9
Salmon, canned, red	do	----	30.5	32.6	32.1	28.8	28.8	29.1	----	31.2	32.0	32.7
Milk, fresh	Quart	10.0	14.0	14.0	14.0	12.5	11.5	12.3	8.0	13.0	13.0	13.0
Milk, evaporated	15–16 oz. can	----	13.6	12.7	12.6	12.0	11.7	11.6	----	11.4	9.7	9.6
Butter	Pound	38.6	57.5	55.4	55.1	50.8	49.1	48.9	33.8	52.6	50.2	49.1
Oleomargarine	do	----	30.2	29.6	30.2	30.1	30.9	31.3	----	26.4	27.4	27.5
Nut margarine	do	----	28.8	29.6	29.8	27.5	28.7	29.0	----	24.4	24.9	25.4
Cheese	do	21.8	36.2	33.9	34.2	36.6	33.5	34.5	19.2	34.0	30.8	30.8
Lard	do	15.3	17.6	17.1	19.4	16.8	16.9	18.6	14.5	12.7	13.4	16.1
Vegetable lard substitute	do	----	22.9	24.7	25.2	20.0	22.8	24.3	----	22.6	25.2	25.9
Eggs, strictly fresh	Dozen	26.6	37.4	36.0	38.7	38.7	36.9	43.3	23.0	34.6	34.0	37.5
Bread	Pound	5.3	8.7	8.4	8.4	8.0	8.2	8.2	5.5	8.9	8.9	9.0
Flour	do	3.3	4.7	4.9	5.2	4.5	4.7	5.2	3.0	3.9	4.4	4.6
Corn meal	do	2.1	4.5	4.5	4.6	4.7	5.2	5.0	2.2	3.1	4.2	4.3
Rolled oats	do	----	9.0	9.1	9.0	8.4	8.5	8.5	----	8.1	8.3	8.5
Corn flakes	8-oz. pkg	----	9.6	9.8	9.6	9.5	9.5	9.5	----	8.8	8.8	8.8
Wheat cereal	28-oz. pkg	----	25.8	25.4	25.4	23.8	24.0	24.3	----	23.3	23.5	23.4
Macaroni	Pound	----	21.1	20.4	20.4	18.7	19.2	19.7	----	19.4	20.8	20.8
Rice	do	10.0	11.0	11.2	11.4	9.5	9.9	9.9	8.4	8.8	9.3	9.6
Beans, navy	do	----	12.2	10.0	10.4	11.0	9.6	9.7	----	10.2	8.2	8.7
Potatoes	do	1.8	4.7	3.5	3.2	4.1	2.9	2.2	1.9	2.7	3.0	2.3
Onions	do	----	7.9	7.8	7.5	6.5	7.9	7.2	----	6.1	6.1	6.0
Cabbage	do	----	6.0	2.9	5.1	5.0	6.3	3.3	----	3.4	3.7	3.7
Beans, baked	No. 2 can	----	11.7	11.0	11.0	11.1	11.2	11.2	----	11.0	11.1	11.1
Corn, canned	do	----	15.5	14.7	14.7	16.3	17.0	17.0	----	15.2	15.6	15.6
Peas, canned	do	----	19.5	20.1	19.7	19.1	19.7	19.8	----	16.6	17.4	17.4
Tomatoes, canned	do	----	12.1	12.1	12.2	12.4	13.7	13.9	----	11.9	13.3	13.5
Sugar, granulated	Pound	5.1	9.8	8.1	8.0	9.1	7.8	7.8	5.4	9.5	8.3	8.1
Tea	do	56.0	80.0	82.5	82.5	62.2	63.6	63.6	55.0	66.6	69.3	70.1
Coffee	do	26.8	38.5	40.5	41.7	35.2	37.8	39.0	24.4	35.5	41.0	41.8
Prunes	do	----	21.1	19.5	19.0	20.3	18.6	19.6	----	21.2	20.4	21.1
Raisins	do	----	17.8	14.8	15.3	15.5	14.3	14.3	----	17.5	15.8	15.8
Bananas	Dozen	----	39.2	38.5	37.3	44.4	40.4	40.4	----	33.0	30.7	29.6
Oranges	do	----	50.9	46.4	46.5	52.2	45.5	48.5	----	46.7	42.2	42.8

CLES OF FOOD IN 51 CITIES ON SPECIFIED DATES—Continued

St. Paul, Minn.				Salt Lake City, Utah				San Francisco, Calif.				Savannah, Ga.			Scranton, Pa.			
Aug. 15—		July 15, 1924	Aug. 15, 1924	Aug. 15—		July 15, 1924	Aug. 15, 1924	Aug. 15—		July 15, 1924	Aug. 15, 1924	Aug. 15, 1923	July 15, 1924	Aug. 15, 1924	Aug. 15—		July 15, 1924	Aug. 15, 1924
1913	1923			1913	1923			1913	1923						1913	1923		
Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
26.6	36.6	35.2	35.3	23.1	28.2	28.7	28.5	20.7	29.4	30.2	30.5	30.8	31.1	29.8	26.8	50.5	50.2	50.0
22.9	31.5	30.3	30.3	20.0	24.3	25.6	25.6	19.3	26.8	27.7	27.9	26.3	26.1	25.0	23.3	40.1	40.9	40.5
20.6	28.3	27.6	27.7	20.0	21.6	21.3	21.0	21.0	28.0	29.0	29.0	24.2	25.6	23.3	23.8	35.9	36.7	36.3
17.0	21.3	21.8	21.7	15.4	16.8	17.5	17.2	15.0	17.3	18.0	18.5	15.7	14.5	14.7	18.0	26.1	27.0	27.1
10.6	10.5	11.2	11.7	12.3	11.7	12.0	12.0	13.3	13.0	13.9	13.9	13.2	12.2	11.8	12.5	10.5	10.8	10.7
19.7	29.7	29.1	32.8	23.0	29.2	28.9	34.5	23.7	36.2	35.3	39.8	28.3	26.1	28.1	22.3	35.9	32.8	38.4
27.2	39.1	35.8	38.5	32.0	38.5	35.7	37.2	34.7	50.3	47.7	49.2	35.0	30.2	33.3	28.0	43.1	39.2	41.2
28.3	44.0	41.7	44.2	30.8	43.8	42.3	45.4	32.0	51.8	51.8	53.5	36.0	34.4	35.4	31.7	54.4	52.1	54.4
17.9	31.5	33.3	32.8	18.5	32.1	31.3	29.9	16.5	34.8	34.4	34.2	36.3	42.5	42.5	20.0	45.3	47.5	47.6
19.4	27.9	28.5	27.2	25.0	31.7	30.6	30.0	23.8	38.0	40.4	40.3	30.5	32.3	32.9	23.3	39.4	43.1	43.1
-----	34.4	35.8	36.1	-----	35.5	35.0	35.0	-----	26.8	27.6	27.6	34.9	34.4	34.1	-----	35.1	34.2	34.2
6.9	12.0	10.5	11.0	8.7	10.0	10.0	10.0	10.0	13.0	14.0	14.0	17.5	17.5	17.3	8.6	13.5	11.0	11.0
-----	12.1	12.1	11.9	-----	11.0	10.3	10.0	-----	11.1	10.0	10.0	11.6	10.5	10.5	-----	12.3	11.5	11.4
32.8	46.5	44.0	42.5	40.0	52.1	47.9	46.2	40.7	56.2	51.9	52.2	53.2	52.1	50.7	35.2	50.6	50.3	50.0
-----	27.7	29.0	29.1	-----	-----	-----	-----	-----	28.0	28.8	28.8	33.1	33.0	33.9	-----	29.3	31.3	32.5
-----	27.0	27.0	27.0	-----	27.9	28.6	28.3	-----	28.3	28.0	28.0	29.9	30.8	31.6	-----	22.0	25.0	25.0
21.0	35.8	33.0	33.9	23.3	31.3	28.5	28.1	19.0	38.0	37.2	37.1	34.4	31.3	30.9	18.0	35.1	34.5	34.4
15.0	17.1	17.6	19.2	19.3	18.8	17.8	21.1	18.0	19.1	19.7	20.6	17.1	17.1	19.1	16.2	17.5	17.2	19.2
-----	24.1	23.7	24.9	-----	26.8	29.0	29.4	-----	25.1	27.2	27.8	17.8	18.5	19.9	-----	22.6	25.5	25.7
24.3	32.3	32.1	35.7	32.9	35.3	32.4	36.1	38.2	45.2	40.4	43.7	43.3	41.2	44.9	30.1	40.4	41.1	45.7
5.9	9.4	9.3	9.3	5.9	9.8	9.8	9.8	5.9	9.2	9.1	9.1	8.5	8.6	8.6	5.6	9.1	9.0	9.0
3.0	4.2	4.7	5.1	2.6	3.2	3.4	3.7	3.4	4.9	5.0	5.1	5.2	5.4	5.5	3.5	5.1	5.2	5.5
2.4	3.5	3.9	4.3	3.3	3.7	3.9	4.1	3.4	4.6	4.7	4.9	3.2	3.5	3.7	-----	5.8	5.6	5.8
-----	9.9	9.3	9.5	-----	9.3	9.0	9.4	-----	9.3	9.5	9.3	8.6	8.7	8.7	-----	9.6	9.8	9.6
-----	10.0	10.0	10.0	-----	11.2	11.1	11.3	-----	10.5	10.6	10.6	9.2	8.9	8.9	-----	10.1	9.8	9.9
-----	25.0	25.0	25.0	-----	24.9	25.3	24.9	-----	23.5	23.6	23.5	23.8	23.3	23.6	-----	25.7	25.3	25.5
-----	18.6	18.4	18.4	-----	19.8	19.4	18.8	-----	14.3	13.8	13.9	17.3	17.5	17.2	-----	22.9	23.2	22.9
10.0	9.1	10.0	10.2	8.2	8.7	9.1	9.3	8.5	9.0	9.5	9.6	7.9	9.0	9.2	8.4	9.5	10.2	10.1
-----	11.8	9.4	9.3	-----	10.9	10.0	10.4	-----	9.7	9.6	9.6	12.0	10.1	10.1	-----	12.5	12.0	11.9
1.0	1.7	3.3	1.5	1.2	2.4	3.0	1.9	1.7	3.7	3.5	3.3	4.0	3.0	3.0	2.0	4.2	2.6	2.3
-----	6.7	6.9	6.9	-----	5.3	5.6	6.1	-----	3.9	3.4	3.6	6.9	7.0	6.9	-----	7.3	6.9	6.8
-----	2.8	3.7	2.7	-----	3.9	6.4	4.7	-----	-----	-----	-----	4.8	4.7	4.6	-----	5.4	5.3	3.9
-----	14.2	14.3	14.3	-----	15.5	15.2	15.2	-----	14.6	13.7	13.6	12.3	12.1	12.1	-----	12.1	12.4	12.3
-----	14.5	15.0	15.0	-----	14.1	14.6	14.6	-----	16.6	17.6	17.6	14.6	14.5	14.4	-----	16.5	16.8	16.8
-----	16.3	17.6	18.0	-----	15.6	15.8	15.7	-----	17.3	18.4	18.4	17.6	18.2	18.2	-----	18.5	18.5	18.5
-----	13.8	14.5	14.5	-----	12.9	14.4	14.4	-----	[1]13.8	[1]15.0	[1]15.0	11.0	11.2	11.6	-----	13.0	13.3	13.3
5.6	10.1	9.2	8.9	6.1	10.5	9.3	9.1	5.5	9.5	8.5	8.4	9.3	8.0	7.9	5.7	9.6	8.0	7.9
45.0	67.1	67.1	67.5	65.7	81.4	83.5	84.6	50.0	57.3	60.2	61.4	68.4	67.2	66.5	52.5	60.7	61.3	61.5
30.0	40.4	46.8	47.5	35.8	44.1	50.2	50.6	32.0	36.5	42.9	44.3	34.9	38.0	38.0	31.3	39.7	43.0	43.6
-----	20.7	18.8	18.9	-----	18.4	14.7	14.9	-----	17.3	16.5	16.6	18.1	14.6	14.7	-----	17.4	16.8	16.6
-----	18.7	16.8	15.9	-----	17.8	14.2	13.8	-----	15.6	14.0	13.5	16.2	14.8	14.2	-----	17.1	14.6	14.6
-----	[2]13.1	[2]10.8	[2]10.8	-----	15.8	[2]17.6	[2]17.3	-----	35.0	36.4	36.4	39.5	34.5	33.2	-----	32.9	34.7	34.4
-----	56.7	51.7	49.6	-----	43.8	41.0	37.8	-----	50.5	41.9	41.4	56.3	42.1	44.8	-----	52.1	51.4	53.2

[1] No. 2½ can.

[2] Per pound.

TABLE 5.--AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES ON SPECIFIED DATES—Concluded

Article	Unit	Seattle, Wash.				Springfield, Ill.			Washington, D. C.			
		Aug. 15—		July 15, 1924	Aug. 15, 1924	Aug. 15, 1923	July 15, 1924	Aug. 15, 1924	Aug. 15—		July 15, 1924	Aug. 15, 1924
		1913	1923						1913	1923		
		Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
Sirloin steak	Pound	24.4	31.5	32.0	31.6	34.8	35.7	35.7	27.8	46.1	45.6	45.3
Round steak	do	21.5	26.5	27.0	26.8	34.3	35.3	34.8	24.5	40.2	39.1	38.4
Rib roast	do	20.0	24.3	25.7	25.5	23.8	22.8	22.9	21.6	34.6	35.0	34.9
Chuck roast	do	16.2	15.8	16.8	16.3	19.7	20.7	20.6	17.3	23.4	24.5	24.5
Plate beef	do	12.7	12.4	13.2	12.9	12.5	12.9	12.7	12.1	12.3	12.5	12.3
Pork chops	do	24.2	33.7	31.4	37.3	28.2	26.7	30.7	23.0	36.5	34.5	38.2
Bacon, sliced	do	34.2	49.0	44.4	47.6	39.3	38.5	39.6	28.4	37.5	32.4	35.6
Ham, sliced	do	31.7	51.1	49.8	52.6	46.4	45.0	45.4	31.0	55.3	52.0	52.8
Lamb, leg of	do	19.4	32.0	33.6	33.0	38.1	42.1	40.0	19.4	41.8	42.7	40.5
Hens	do	23.8	31.1	32.6	32.2	29.9	31.8	31.5	21.9	42.0	39.5	38.4
Salmon, canned, red	do	.....	30.5	30.3	30.7	32.9	33.5	33.5	.....	28.6	27.7	27.9
Milk, fresh	Quart	8.5	12.0	11.5	11.5	12.5	12.5	12.5	8.0	14.0	14.0	14.0
Milk, evaporated	15–16 oz. can	.....	10.9	10.3	10.4	12.8	11.9	11.8	.....	12.3	11.6	11.6
Butter	Pound	39.0	52.4	47.0	48.6	51.0	48.3	46.5	36.6	54.3	52.7	508
Oleomargarine	do	.....	28.5	30.0	30.0	28.7	30.2	31.0	.....	28.1	30.3	30.5
Nut margarine	do	.....	29.0	29.5	29.5	27.8	29.0	29.2	.....	27.5	28.7	28.8
Cheese	do	21.7	36.4	34.7	34.7	37.1	36.4	36.6	23.8	37.8	36.4	37.5
Lard	do	17.4	19.0	17.8	19.9	16.6	17.1	19.4	15.3	17.0	16.5	19.8
Vegetable lard substitute	do	.....	24.8	28.2	28.1	25.9	28.3	27.5	.....	23.3	24.9	25.4
Eggs, strictly fresh	Dozen	39.0	41.1	39.2	45.1	30.7	30.5	37.3	30.0	41.1	40.8	44.5
Bread	Pound	5.5	9.9	9.8	10.0	9.2	10.2	10.2	5.7	9.0	9.0	9.0
Flour	do	2.9	4.4	4.5	4.8	4.7	4.8	5.0	3.8	4.8	5.0	5.4
Corn meal	do	3.2	4.1	4.2	4.6	4.3	4.8	5.0	2.5	3.9	4.4	4.5
Rolled oats	do	.....	8.2	8.9	9.0	10.5	10.7	10.7	.....	9.2	9.2	9.2
Corn flakes	8-oz. pkg	.....	11.7	11.5	11.4	10.1	9.7	10.6	.....	9.5	9.4	9.5
Wheat cereal	28-oz. pkg	.....	24.7	25.0	24.7	25.2	25.4	25.4	.....	24.1	23.6	23.6
Macaroni	Pound	.....	18.4	18.1	18.1	19.7	19.5	19.5	.....	20.7	21.5	21.5
Rice	do	7.7	11.1	11.8	11.8	10.1	10.4	10.2	9.8	10.1	10.4	10.6
Beans, navy	do	.....	10.8	10.3	10.6	10.6	8.7	9.1	.....	11.4	8.8	9.1
Potatoes	do	1.6	2.7	4.1	2.9	3.0	3.3	2.7	2.0	4.8	3.2	2.6
Onions	do	.....	4.7	5.0	4.9	8.3	8.3	7.9	.....	7.9	7.8	6.9
Cabbage	do	.....	4.9	5.5	5.0	4.9	5.0	2.9	.....	5.7	4.7	4.8
Beans, baked	No. 2 can	.....	15.2	14.6	14.6	13.4	12.0	11.4	.....	11.5	11.4	11.4
Corn, canned	do	.....	16.7	17.7	17.5	14.7	14.6	14.9	.....	15.1	14.5	14.9
Peas, canned	do	.....	18.4	20.2	20.2	17.7	17.5	17.5	.....	15.5	16.7	16.6
Tomatoes, canned	do	.....	[1] 15.6	[1] 16.0	[1] 16.0	14.9	14.8	14.8	.....	11.8	11.4	11.5
Sugar, granulated	Pound	6.3	10.0	9.2	9.1	10.5	9.4	9.2	5.2	9.4	7.7	7.6
Tea	do	50.0	68.2	75.9	75.7	75.4	73.6	73.6	57.5	76.7	77.7	78.1
Coffee	do	28.0	38.6	44.5	45.6	38.1	40.9	42.5	28.8	35.3	37.5	39.5
Prunes	do	.....	16.1	14.3	14.3	20.7	19.0	18.0	.....	21.0	19.7	18.3
Raisins	do	.....	17.1	15.4	15.5	20.2	16.9	16.4	.....	17.0	15.0	14.8
Bananas	Dozen	.....	[2] 15.8	[2] 15.0	[2] 15.0	[2] 11.8	[2] 8.9	[2] 9.3	.....	38.9	36.1	35.6
Oranges	do	.....	46.9	43.9	42.7	49.9	41.4	47.3	.....	54.6	51.1	53.4

[1] No. 2½ can. [2] Per pound.

Comparison of Retail Food Costs in 51 Cities

TABLE 6 shows for 39 cities the percentage of increase or decrease in the retail cost of food [6] in August, 1924, compared with the average cost in the year 1913, in August, 1923, and in July, 1924. For 12 other cities comparisons are given for the one-year and the one-month periods. These cities have been scheduled by the bureau at different dates since 1913. These percentage changes are based on actual retail prices secured each month from retail dealers and on the average family consumption of these articles in each city.[7]

[6] For list of articles, see note 2, p. 34.

[7] The consumption figure used from January, 1913, to December, 1920, for each article in each city is given in the MONTHLY LABOR REVIEW for November, 1918, pp. 94 and 95. The consumption figures which have been used for each month beginning with January, 1921, are given in the MONTHLY LABOR REVIEW for March, 1921, p. 26.

Effort has been made by the bureau each month to have perfect reporting cities. For the month of August 99 per cent of all the firms reporting in the 51 cities sent in a report promptly. The following were perfect reporting cities; that is, every merchant in the following-named 38 cities who is cooperating with the bureau sent in his report in time for his prices to be included in the city averages: Atlanta, Baltimore, Boston, Bridgeport, Buffalo, Butte, Charleston, Cincinnati, Cleveland, Dallas, Denver, Detroit, Fall River, Indianapolis, Jacksonville, Kansas City, Los Angeles, Louisville, Manchester, Memphis, Milwaukee, Minneapolis, Newark, New Haven, New York, Norfolk, Omaha, Philadelphia, Portland, Me., Providence, Richmond, Rochester, St. Louis, St. Paul, Salt Lake City, San Francisco, Savannah, and Scranton.

The following summary shows the promptness with which the merchants responded in August, 1924:

RETAIL PRICE REPORTS RECEIVED DURING AUGUST, 1924

Item	United States	Geographical division				
		North Atlantic	South Atlantic	North Central	South Central	Western
Percentage of reports received	99	99.7	99.4	99	97	99
Number of cities in each section from which every report was received	38	13	7	10	3	5

TABLE 6.—PERCENTAGE CHANGES IN THE RETAIL COST OF FOOD IN AUGUST, 1924, COMPARED WITH THE COST IN JULY, 1924, AUGUST, 1923, AND WITH THE AVERAGE COST IN THE YEAR 1913, BY CITIES

City	Percentage increase August, 1924, compared with year 1913	Percentage decrease August, 1924, compared with August, 1923	Percentage increase August, 1924, compared with July, 1924	City	Percentage increase August, 1924, compared with year 1913	Percentage decrease August, 1924, compared with August, 1923	Percentage increase August, 1924, compared with July, 1924
Atlanta	42.6	1.4	1.5	Minneapolis	40.5	1.5	[2] 2.4
Baltimore	50.0	1.4	1.5	Mobile	----	[1] .4	1.7
Birmingham	48.4	0	1.9	Newark	39.4	4.4	.4
Boston	48.5	4.0	.4	New Haven	42.8	3.8	[2] .1
Bridgeport	----	4.3	0	New Orleans	42.6	[1] 1.1	2.6
Buffalo	45.2	4.3	[2] .2	New York	46.4	3.5	.1
Butte	----	1.3	.8	Norfolk	----	3.1	2.1
Charleston	46.8	1.6	.7	Omaha	39.7	1.8	[2] .8
Chicago	53.6	.4	[2] .6	Peoria	----	[1] .7	[2] .4
Cincinnati	37.3	3.4	[2] .2	Philadelphia	43.4	4.9	.1
Cleveland	44.6	1.6	2.4	Pittsburgh	44.8	2.6	[2] .6
Columbus	----	[1] 1.7	[2] .5	Portland, Me	----	3.0	.7
Dallas	46.3	[1] 3.6	1.3	Portland, Oreg	33.5	[1] 1.2	[2] .2
Denver	32.2	2.4	[2] 1.1	Providence	48.6	3.5	1.7
Detroit	50.4	3.8	[2] .1	Richmond	51.3	2.9	1.8
Fall River	42.7	4.0	1.7	Rochester	----	2.6	1.0
Houston	----	[1] 1.3	2.6	St. Louis	44.2	[1] 1.4	.5
Indianapolis	39.8	3.4	[2] 1.7	St. Paul	----	.6	[2] 2.3
Jacksonville	39.1	[1] .7	.6	Salt Lake City	24.5	1.6	[2] 1.5
Kansas City	38.8	[1] .4	.5	San Francisco	42.3	.1	1.1
Little Rock	37.0	.5	2.9	Savannah	----	2.5	1.0
Los Angeles	41.3	[1] 2.1	1.9	Scranton	45.7	5.0	.8
Louisville	36.2	[1] 1.6	1.8	Seattle	39.6	[1] 1.1	.2
Manchester	43.9	5.5	1.0	Springfield, Ill	----	[1] 1.3	.1
Memphis	33.7	2.8	.3	Washington, D. C	50.9	3.5	.9
Milwaukee	49.1	[1] .4	.5				

[1] Increase. [2] Decrease.

Retail Prices of Coal in the United States[a]

THE following table shows the average retail prices of coal on January 15 and July 15, 1913, August 15, 1923, and July 15 and August 15, 1924, for the United States and for each of the cities from which prices have been obtained. Prices for coal are secured from the cities from which monthly retail prices of food are received.

In addition to the prices for Pennsylvania anthracite, prices are shown for Colorado, Arkansas, and New Mexico anthracite in those cities where these coals form any considerable portion of the sales for household use.

The prices shown for bituminous coal are averages of prices of the several kinds used. The coal dealers in each city are asked to quote prices on the kinds of bituminous coal usually sold for household use.

The prices quoted are for coal delivered to consumers, but do not include charges for storing the coal in cellar or coal bins where an extra handling is necessary.

AVERAGE RETAIL PRICES OF COAL PER TON OF 2,000 POUNDS, FOR HOUSEHOLD USE, ON JANUARY 15 AND JULY 15, 1913, AUGUST 15, 1923, AND JULY 15 AND AUGUST 15, 1924

City, and kind of coal	1913		1923	1924	
	Jan. 15	July 15	Aug. 15	July 15	Aug. 15
United States:					
Pennsylvania anthracite—					
Stove	$7.99	$7.46	$15.19	$15.24	$15.20
Chestnut	8.15	7.68	15.15	15.10	15.13
Bituminous	5.48	5.39	9.94	8.94	8.63
Atlanta, Ga.:					
Bituminous	5.88	4.83	8.29	7.13	7.11
Baltimore, Md.:					
Pennsylvania anthracite—					
Stove	[1] 7.70	[1] 7.24	[1] 15.92	[1] 15.79	[1] 15.75
Chestnut	[1] 7.93	[1] 7.49	[1] 15.75	[1] 15.54	[1] 15.50
Bituminous	----------	----------	8.10	7.60	7.40
Birmingham, Ala.:					
Bituminous	4.22	4.01	7.92	7.70	7.68
Boston, Mass.:					
Pennsylvania anthracite—					
Stove	8.25	7.50	15.50	15.70	15.75
Chestnut	8.25	7.75	15.50	15.70	15.75
Bridgeport, Conn.:					
Pennsylvania anthracite—					
Stove	----------	----------	16.00	15.38	15.38
Chestnut	----------	----------	16.00	15.38	15.38
Buffalo, N. Y.:					
Pennsylvania anthracite—					
Stove	6.75	6.54	13.18	13.44	13.53
Chestnut	6.99	6.80	13.18	13.33	13.39
Butte, Mont.:					
Bituminous	----------	----------	11.18	10.81	10.80
Charleston, S. C.:					
Pennsylvania anthracite—					
Stove	[1] 8.38	[1] 7.75	[1] 17.00	[1] 17.00	[1] 17.00
Chestnut	[1] 8.50	[1] 8.00	[1] 17.10	[1] 17.10	[1] 17.10
Bituminous	[1] 6.75	[1] 6.75	12.00	11.00	11.00
Chicago, Ill.:					
Pennsylvania anthracite—					
Stove	8.00	7.80	16.19	16.25	16.50
Chestnut	8.25	8.05	16.00	16.25	16.50
Bituminous	4.97	4.65	8.80	7.85	7.85
Cincinnati, Ohio:					
Bituminous	3.50	3.38	8.58	7.17	7.17
Cleveland, Ohio:					
Pennsylvania anthracite—					
Stove	7.50	7.25	15.08	14.31	14.31
Chestnut	7.75	7.50	15.08	14.31	14.31
Bituminous	4.14	4.14	9.60	7.94	7.91

[1] Per ton of 2,240 pounds.

[a] Prices of coal were formerly secured semiannually and published in the March and September issues of the MONTHLY LABOR REVIEW. Since June, 1920, these prices have been secured and published monthly.

AVERAGE RETAIL PRICES OF COAL PER TON OF 2,000 POUNDS, FOR HOUSEHOLD USE, ON JANUARY 15 AND JULY 15, 1913, AUGUST 15, 1923, AND JULY 15 AND AUGUST 15, 1924—Continued

City, and kind of coal	1913		1923	1924	
	Jan. 15	July 15	Aug. 15	July 15	Aug. 15
Columbus, Ohio:					
Bituminous			$7.49	$6.47	$6.36
Dallas, Tex.:					
Arkansas anthracite—					
Egg			16.67	16.25	16.38
Bituminous	$8.25	$7.21	13.96	13.73	13.72
Denver, Colo.:					
Colorado anthracite—					
Furnace, 1 and 2 mixed	8.88	9.00	16.63	16.00	16.00
Stove, 3 and 5 mixed	8.50	8.50	16.63	16.00	16.00
Bituminous	5.25	4.88	10.38	9.07	9.16
Detroit, Mich.:					
Pennsylvania anthracite—					
Stove	8.00	7.45	16.25	15.25	15.13
Chestnut	8.25	7.65	16.19	15.25	15.13
Bituminous	5.20	5.20	10.25	9.18	9.07
Fall River, Mass.:					
Pennsylvania anthracite—					
Stove	8.25	7.43	15.50	15.33	15.33
Chestnut	8.25	7.61	15.42	15.33	15.33
Houston, Tex.:					
Bituminous			11.83	11.00	11.50
Indianapolis, Ind.:					
Pennsylvania anthracite—					
Stove	8.95	8.00	16.00	16.00	16.00
Chestnut	9.15	8.25	16.00	16.00	16.00
Bituminous	3.81	3.70	8.21	6.78	6.75
Jacksonville, Fla.:					
Bituminous	7.50	7.00	13.00	12.00	12.00
Kansas City, Mo.:					
Arkansas anthracite—					
Furnace			15.64	14.70	14.50
Stove, No. 4			16.88	16.00	15.81
Bituminous	4.39	3.94	8.18	8.25	8.24
Little Rock, Ark.:					
Arkansas anthracite—					
Egg			14.00	14.00	14.00
Bituminous	6.00	5.33	10.63	10.00	10.21
Los Angeles, Calif.:					
Bituminous	13.52	12.50	15.50	14.50	14.80
Louisville, Ky.:					
Bituminous	4.20	4.00	8.53	7.20	7.15
Manchester, N. H.:					
Pennsylvania anthracite—					
Stove	10.00	8.50	17.17	17.58	17.75
Chestnut	10.00	8.50	17.17	16.83	17.00
Memphis, Tenn.:					
Bituminous	[1] 4.34	[1] 4.22	7.43	8.00	7.93
Milwaukee, Wis.:					
Pennsylvania anthracite—					
Stove	8.00	7.85	16.00	16.75	16.70
Chestnut	8.25	8.10	16.00	16.60	16.55
Bituminous	6.25	5.71	10.08	9.02	9.02
Minneapolis, Minn.:					
Pennsylvania anthracite—					
Stove	9.25	9.05	17.50	17.90	18.00
Chestnut	9.50	9.30	17.38	17.75	17.85
Bituminous	5.89	5.79	12.07	10.40	10.49
Mobile, Ala.:					
Bituminous			9.86	9.71	9.71
Newark, N. J.:					
Pennsylvania anthracite—					
Stove	6.50	6.25	12.75	13.13	13.16
Chestnut	6.75	6.50	12.75	13.13	13.16
New Haven, Conn.:					
Pennsylvania anthracite—					
Stove	7.50	6.25	15.75	14.75	14.75
Chestnut	7.50	6.25	15.75	14.75	14.75
New Orleans, La.:					
Pennsylvania anthracite—					
Stove	10.00	10.00	20.25	19.25	19.25
Chestnut	10.50	10.50	20.25	19.50	19.50
Bituminous	[1] 6.06	[1] 6.06	9.63	10.11	9.96
New York, N. Y.:					
Pennsylvania anthracite—					
Stove	7.07	6.66	14.08	13.70	13.78
Chestnut	7.14	6.80	14.08	13.70	13.78
Norfolk, Va.:					
Pennsylvania anthracite—					
Stove			15.00	14.50	14.50
Chestnut			15.00	14.50	14.50
Bituminous			11.36	8.25	8.28

[1] Per 10-barrel lots (1,800 pounds).

AVERAGE RETAIL PRICES OF COAL PER TON OF 2,000 POUNDS, FOR HOUSEHOLD USE, ON JANUARY 15 AND JULY 15, 1913, AUGUST 15, 1923, AND JULY 15 AND AUGUST 15, 1924—Concluded

City, and kind of coal	1913		1923	1924	
	Jan. 15	July 15	Aug. 15	July 15	Aug. 15
Omaha, Nebr.:					
Bituminous	$6.33	$6.13	$10.85	$9.80	$9.80
Peoria, Ill.:					
Bituminous			6.46	6.31	6.22
Philadelphia, Pa.:					
Pennsylvania anthracite—					
Stove	[1] 7.16	[1] 6.89	[1] 15.43	[1] 15.04	[1] 15.04
Chestnut	[1] 7.38	[1] 7.14	[1] 15.00	[1] 14.86	[1] 14.86
Pittsburgh, Pa.:					
Pennsylvania anthracite—					
Stove	[1] 7.94	[1] 7.38	[1] 16.75	[1] 16.00	[1] 16.25
Chestnut	[1] 8.00	[1] 7.44	[1] 16.75	[1] 16.00	[1] 16.25
Bituminous	[2] 3.16	[2] 3.18	7.54	7.06	7.00
Portland, Me.:					
Pennsylvania anthracite—					
Stove			15.84	16.26	16.32
Chestnut			15.84	16.26	16.32
Portland, Oreg.:					
Bituminous	9.79	9.66	13.59	12.82	13.49
Providence, R. I.:					
Pennsylvania anthracite—					
Stove	[4] 8.25	[4] 7.50	[4] 15.30	[4] 15.50	[4] 15.50
Chestnut	[4] 8.25	[4] 7.75	[4] 15.30	[4] 15.50	[4] 15.50
Richmond, Va.:					
Pennsylvania anthracite—					
Stove	8.00	7.25	15.63	15.50	15.50
Chestnut	8.00	7.25	15.63	15.50	15.50
Bituminous	5.50	4.94	11.78	8.94	8.89
Rochester, N. Y.:					
Pennsylvania anthracite—					
Stove			13.45	14.05	14.15
Chestnut			13.45	13.95	14.15
St. Louis, Mo.:					
Pennsylvania anthracite—					
Stove	8.44	7.74	16.31	16.13	16.13
Chestnut	8.68	7.99	16.63	16.38	16.38
Bituminous	3.36	3.04	7.15	6.28	6.29
St. Paul, Minn.:					
Pennsylvania anthracite—					
Stove	9.20	9.05	17.50	17.90	17.97
Chestnut	9.45	9.30	17.35	17.75	17.82
Bituminous	6.07	6.04	12.17	10.60	10.75
Salt Lake, Utah:					
Colorado anthracite—					
Furnace, 1 and 2 mixed	11.00	11.50	17.50	17.50	17.75
Stove, 3 and 5 mixed	11.00	11.50	17.50	17.50	17.75
Bituminous	5.64	5.46	8.31	8.36	8.31
San Francisco, Calif.:					
New Mexico anthracite—					
Cerrillos egg	17.00	17.00	26.50	25.00	25.00
Colorado anthracite—					
Egg	17.00	17.00	24.50	24.50	24.50
Bituminous	12.00	12.00	16.80	15.94	15.89
Savannah, Ga.:					
Pennsylvania anthracite—					
Stove			[5] 17.05	[5] 17.00	[5] 17.00
Chestnut			[5] 17.05	[5] 17.00	[5] 17.00
Bituminous			[5] 11.40	[5] 10.58	[5] 10.58
Scranton, Pa.:					
Pennsylvania anthracite—					
Stove	4.25	4.31	9.82	10.33	10.42
Chestnut	4.50	4.56	9.82	10.30	10.38
Seattle, Wash.:					
Bituminous	[6] 7.63	[6] 7.70	[6] 10.15	[6] 9.86	[6] 10.04
Springfield, Ill.:					
Bituminous			4.50	4.50	4.50
Washington, D. C.:					
Pennsylvania anthracite—					
Stove	[1] 7.50	[1] 7.38	[1] 15.33	[1] 15.43	[1] 15.43
Chestnut	[1] 7.65	[1] 7.53	[1] 15.21	[1] 15.07	[1] 15.07
Bituminous			[1] 9.88	[1] 8.56	[1] 8.52

[1] Per ton of 2,240 pounds.
[2] Per 25-bushel lots (1,900 pounds).
[4] Fifty cents per ton additional is charged for "binning." Most customers require binning or basketing the coal into the cellar.
[5] All coal sold in Savannah is weighed by the city. A charge of 10 cents per ton or half ton is made. This additional charge has been included in the above prices.
[6] Prices in Zone A. The cartage charges in Zone A were as follows: January and July, 1913, $0.50; August, 1923, and July and August, 1924, $1.25. These charges have been included in the price.

Index Numbers of Wholesale Prices in August, 1924

A FURTHER upward movement of wholesale prices is shown for August by information gathered in representative markets by the United States Department of Labor through the Bureau of Labor Statistics. The bureau's weighted index number, which includes 404 commodities or price series, rose to 149.7 for August, compared with 147.0 for July and 150.1 for August, 1923.

Large increases in cost of farm products and foods were again chiefly responsible for the rise in the general price level. Among farm products advances in the price of grains, hogs, eggs, hay, hides, tobacco, and wool offset declines in the price of lambs, cotton and cottonseed, onions, and potatoes, resulting in a net increase of 3 per cent for the group. In foods there were substantial increases in the price of fresh and cured pork, hams, coffee, rye and wheat flour, lard, lemons, oranges, and vegetable oils. The net increase in this group approximated 4 per cent. Important articles in the groups of cloths and clothing, chemicals and drugs, and miscellaneous commodities also showed price increases.

Building materials and house-furnishing goods were slightly higher in price than in July, while fuels were cheaper. No change in the general price level was reported for the group of metals and metal products.

Of the 404 commodities or price series for which comparable data for July and August were collected, increases were shown in 167 instances and decreases in 99 instances. In the case of 138 commodities no change in price was reported.

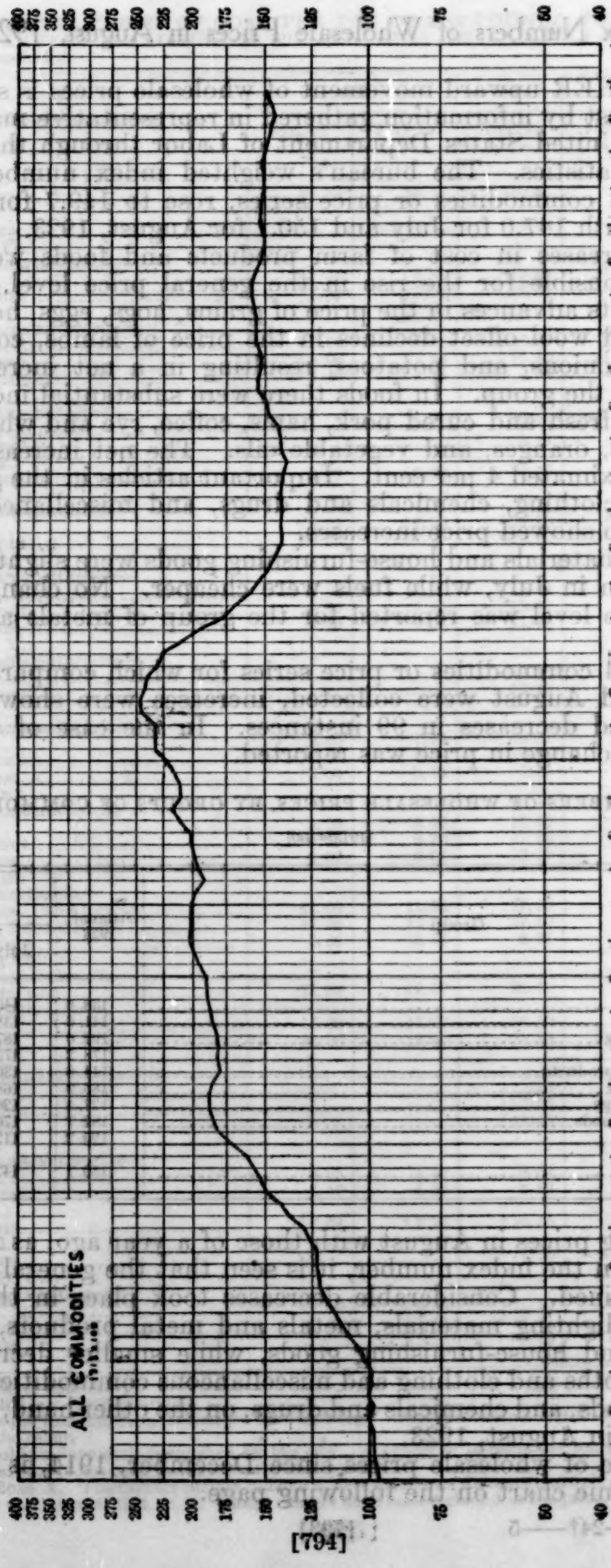
INDEX NUMBERS OF WHOLESALE PRICES, BY GROUPS OF COMMODITIES

[1913=100]

Group	August, 1923	1924	
		July	August
Farm products	138.6	140.9	145.3
Foods	141.6	138.7	144.0
Cloths and clothing	192.6	187.5	189.9
Fuel and lighting	178.2	173.2	169.7
Metals and metal products	144.6	130.4	130.4
Building materials	185.9	168.8	169.2
Chemicals and drugs	127.4	126.5	130.1
House-furnishing goods	182.7	170.8	171.0
Miscellaneous	120.2	112.4	115.0
All commodities	150.1	147.0	149.7

Comparing prices in August with those of a year ago, as measured by changes in the index number, it is seen that the general level has slightly declined. Considerable decreases took place in the groups of fuel and lighting materials, metals and metal products, building materials, and house-furnishing goods, while smaller decreases are shown for cloths and clothing and miscellaneous commodities. Farm products, foods, and chemicals and drugs, on the other hand, averaged higher than in August, 1923.

The course of wholesale prices since December, 1914, is shown in the logarithmic chart on the following page.



TREND OF WHOLESALE PRICES IN THE UNITED STATES, DECEMBER, 1914, TO AUGUST, 1924

Comparison of Retail Price Changes in the United States and Foreign Countries

THE principal index numbers of retail prices published by foreign countries have been brought together with those of this bureau in the subjoined table after having been reduced in most cases to a common base, namely, prices for July, 1914, equal 100. This base was selected instead of the average for the year 1913, which is used in other tables of index numbers compiled by the bureau, because of the fact that in numerous instances satisfactory information for 1913 was not available. A part of the countries shown in the table now publish index numbers of retail prices on the July, 1914, base. In such cases, therefore, the index numbers are reproduced as published. For other countries the index numbers here shown have been obtained by dividing the index for each month specified in the table by the index for July, 1914, or the nearest period thereto as published in the original sources. As stated in the table, the number of articles included in the index numbers for the different countries differs widely. These results should not, therefore, be considered as closely comparable with one another. In certain instances, also, the figures are not absolutely comparable from month to month over the entire period, owing to slight changes in the list of commodities and the localities included at successive dates.

INDEX NUMBERS OF RETAIL PRICES IN THE UNITED STATES AND OTHER COUNTRIES

Country	United States	Canada	Austria (Vienna)	Belgium	Czecho-slovakia	Den-mark	Finland	France (except Paris)	France (Paris)
Number of localities.	51	60	1	59	22	100	21	320	1
Commodities included.	43 foods	29 foods	16 foods	56 (foods, etc.)	23 (17 foods)	Foods	36 foods	13 (11 foods)	13 (11 foods)
Computing agency.	Bureau of Labor Statistics	Department of Labor	Parity Commission	Ministry of Industry and Labor	Office of Statistics	Government Statistical Department	Central Bureau of Statistics	Ministry of Labor	Ministry of Labor
Base=100.	July, 1914	July, 1914	July, 1914=1	April, 1914	July, 1914	July, 1914	January-June, 1914	August, 1914	July, 1914
Month									
1921									
Jan.	169	195	.....	450	1628	276	1205	.....	410
Feb.	155	190	.....	434	1454	.....	1138	429	382
Mar.	153	178	.....	411	1362	.....	1169	.....	359
Apr.	149	171	.....	399	1366	.....	1145	.....	328
May	142	165	.....	389	1371	.....	1157	363	317
June	141	150	.....	384	1388	.....	1188	.....	312
July	145	148	.....	379	1303	236	1323	.....	306
Aug.	152	154	.....	384	1351	.....	1369	350	317
Sept.	150	159	.....	386	1428	.....	1404	.....	329
Oct.	150	155	.....	391	1463	.....	1401	.....	331
Nov.	149	149	.....	394	1484	.....	1324	348	326
Dec.	147	148	579	393	1475	.....	1230	.....	323

INDEX NUMBERS OF RETAIL PRICES IN THE UNITED STATES AND OTHER COUNTRIES—Continued

Country	United States	Canada	Austria (Vienna)	Belgium	Czecho-slovakia	Den-mark	Finland	France (except Paris)	France (Paris)
Number of localities	51	60	1	59	22	100	21	320	1
Commodities included	43 foods	29 foods	16 foods	56 (foods, etc.)	23 (17 foods)	Foods	36 foods	13 (11 foods)	13 (11 foods)
Computing agency	Bureau of Labor Statistics	Department of Labor	Parity Commission	Ministry of Industry and Labor	Office of Statistics	Government Statistical Department	Central Bureau of Statistics	Ministry of Labor	Ministry of Labor
Base=100	July, 1914	July, 1914	July, 1914=1	April, 1914	July, 1914	July, 1914	January-June, 1914	August, 1914	July, 1914
Month									
1922									
Jan.	139	149	748	387	1467	197	1151	----------	318
Feb.	139	143	871	380	1461	----------	1145	323	307
Mar.	136	142	904	371	1414	----------	1124	----------	294
Apr.	136	138	1043	367	1415	----------	1127	----------	304
May	136	138	1374	365	1444	----------	1132	315	317
June	138	137	2421	366	1475	----------	1139	----------	307
July	139	138	3282	366	1430	184	1144	----------	297
Aug.	136	141	7224	366	1290	----------	1165	312	289
Sept.	137	139	13531	371	1105	----------	1166	----------	291
Oct.	140	138	11822	376	1016	----------	1157	----------	290
Nov.	142	139	11145	384	984	----------	1140	314	297
Dec.	144	140	10519	384	961	----------	1122	----------	305
1923									
Jan.	141	142	10717	383	941	180	1108	----------	309
Feb.	139	142	10784	397	934	----------	1103	331	316
Mar.	139	145	11637	408	926	----------	1096	----------	321
Apr.	140	143	12935	409	927	----------	1047	----------	320
May	140	140	13910	413	928	----------	1016	337	325
June	141	138	14132	419	933	----------	1004	----------	331
July	144	137	12911	429	921	188	1003	----------	321
Aug.	143	142	12335	439	892	----------	1087	349	328
Sept.	146	141	12509	453	903	----------	1103	----------	339
Oct.	147	144	12636	458	901	----------	1140	----------	349
Nov.	148	144	12647	463	898	----------	1133	373	355
Dec.	147	145	12860	470	909	----------	1112	----------	365
1924									
Jan.	146	145	13527	480	917	194	1089	----------	376
Feb.	144	145	13821	495	917	----------	1070	399	384
Mar.	141	143	13930	510	908	----------	1067	----------	392
Apr.	138	137	13838	498	907	----------	1035	----------	380
May	138	133	14169	485	916	----------	1037	393	378
June	139	133	14457	492	923	----------	1040	----------	370

INDEX NUMBERS OF RETAIL PRICES IN THE UNITED STATES AND OTHER COUNTRIES—Concluded

Country	Italy	Netherlands	Norway	Sweden	Switzerland	United Kingdom	South Africa	India (Bombay)	Australia	New Zealand
Number of localities.	47	6	31	49	33	600	9	1	30	25
Commodities included.	21 foods	29 (27 foods)	Foods	40 (foods, etc.)	Foods	21 foods	18 foods	17 foods	46 foods	59 foods
Computing agency.	Ministry of National Economy	Central Bureau of Statistics	Central Bureau of Statistics	Social Board	Labor Office	Ministry of Labor	Office of Census and Statistics	Labor Office	Bureau of Census and Statistics	Census and Statistics Office
Base=100.	1913	January–June, 1914	July, 1914	July, 1914	June, 1914	July, 1914	1914	July, 1914	July, 1914	July, 1914
Month										
1921										
Jan.	542	209	334	283	229	278	.....	163	186	178
Feb.	540	189	308	262	225	263	166	156	184	175
Mar.	556	183	299	253	221	249	.....	154	181	169
Apr.	564	179	300	248	217	238	.....	154	173	169
May	544	173	292	237	209	232	151	162	168	167
June	509	170	290	234	208	218	.....	169	165	166
July	501	170	292	232	205	220	.....	174	161	164
Aug.	534	171	297	234	205	226	136	177	158	163
Sept.	542	176	290	228	203	225	.....	183	154	161
Oct.	581	173	288	218	199	210	.....	180	149	156
Nov.	584	172	281	211	192	200	128	179	146	152
Dec.	585	169	268	202	189	195	.....	176	143	150
1922										
Jan.	577	165	257	190	185	185	121	169	142	147
Feb.	560	164	245	189	173	179	119	160	140	145
Mar.	546	164	238	185	162	177	119	161	141	141
Apr.	524	163	234	182	159	173	121	157	143	144
May	531	159	230	178	152	172	120	158	146	145
June	530	158	227	179	153	170	118	158	146	143
July	527	157	233	179	157	180	116	160	148	144
Aug.	531	155	232	181	152	175	116	159	149	141
Sept.	537	154	228	180	153	172	117	161	149	139
Oct.	555	149	220	178	153	172	119	158	146	139
Nov.	562	146	216	170	155	176	120	155	145	139
Dec.	557	147	215	168	155	178	118	157	146	138
1923										
Jan.	542	148	214	166	155	175	117	151	145	139
Feb.	527	149	214	165	154	173	117	150	144	140
Mar.	524	149	214	166	156	171	117	149	145	141
Apr.	530	149	212	163	158	168	117	150	152	142
May	535	147	214	161	161	162	118	148	156	143
June	532	145	213	161	165	160	118	146	162	142
July	518	145	218	160	164	162	116	148	164	142
Aug.	512	143	220	161	162	165	115	149	165	143
Sept.	514	142	218	165	163	168	115	149	161	145
Oct.	517	145	217	165	162	172	117	147	157	146
Nov.	526	149	221	164	166	173	120	147	157	147
Dec.	528	149	226	164	167	176	118	152	156	147
1924										
Jan.	527	150	230	163	168	175	120	154	155	150
Feb.	529	151	234	162	167	177	122	151	153	149
Mar.	523	152	241	162	167	176	122	147	152	150
Apr.	.....	152	240	159	165	167	123	143	150	150
May	.....	151	241	159	165	163	122	143	151	150
June	.....	151	240	158	168	160	120	147	149	150

Trend of Farm Wages and Prices Compared with Certain Other Trends

THE following comparison of index numbers of farm wages and prices with several other index numbers of wages and prices is taken from the monthly summary of The Agricultural Situation (August 1, 1924), published by the Bureau of Agricultural Economics of the United States Department of Agriculture:

GENERAL TREND OF WAGES AND PRICES
[1913=100]

Year	General wage level, N. Y. factory workers (1914=100)	Farm wages (monthly without board)	Retail price of food (U. S. Dept. of Labor)	Wholesale price of food (U. S. Dept. of Labor)	Wholesale price of all commodities (U. S. Dept. of Labor)	Farm price of crops, 15th of month	Farm price of livestock, 15th of month
1913	----------	100	100	100	100	100	100
1914	100	99	102	102	98	108	103
1915	103	99	101	105	101	110	95
1916	116	108	114	121	127	124	111
1917	131	133	146	167	177	208	164
1918	188	155	168	188	194	224	192
1919	188	186	186	207	206	234	198
1920	226	214	203	220	226	238	168
1921	206	143	153	144	147	109	107
1922	201	138	142	138	149	113	111
1923	218	155	146	144	154	136	103

Cost-of-Living Survey of Portland, Oreg., January, 1924

FOR the purpose of obtaining as accurate an estimate as possible of a reasonable price budget of a worker's family in Portland, Oreg., a cost-of-living survey of Portland was made in January, 1924, for the Farmer-Labor Legal Bureau of that city by Jessie M. Short, of the department of mathematics of Reed College.[1] The report of this survey was first used in the hearings for a wage increase before a private board of arbitration by the employees of the Portland Railway Light & Power Co., and it has also been used in connection with wage adjustments by various unions. It is now before the State board of arbitration in the case of the mailers and newspaper publishers.

The cost-of-living studies of the United States Bureau of Labor Statistics were taken as the basis of the survey, the standard family and the quantity budgets for food, clothing, and household furnishings adopted by that bureau being used and the prices of these articles obtained from representative Portland stores. Two food-cost budgets were compiled: (1) An "actual" budget, using the quantity budget of the United States Bureau of Labor Statistics based on actual food budgets of 12,000 families,[2] which, because an upper but no lower limit was placed upon income and because the data were gathered in 1918 and 1919 when the cost of food had reached its peak, represents minimum amounts for the maintenance of a family; (2) an "ideal" or standard budget, based on the "health and decency budget" of the United States Bureau of Labor Statistics,[3]

[1] Data are from Farmer-Labor Legal Bureau: Cost-of-living survey of Portland, Oreg., January, Portland, 1924, 36 pp. (typewritten); letter from Farmer-Labor Legal Bureau dated July 19, 1924.
[2] U. S. Bureau of Labor Statistics, Bul. No. 326: Methods of procuring and computing statistical information of the Bureau of Labor Statistics, pp. 6-21.
[3] MONTHLY LABOR REVIEW, June, 1920, pp. 1-18.

obtained by averaging the actual amounts of food used by 280 families selected because they averaged in size approximately 3.35 equivalent adult males (the standard family adopted) and because their food budgets conformed fairly closely in food values with the scientifically determined requirements of the family as to the amount of food.

Local conditions in Portland were taken into consideration in using these quantity budgets, such as the fact that the climate of Portland makes it possible to dispense with ice, and that the amount for "cleaning supplies" need not be so large, as the Portland workman lives, not in crowded down-town sections, but in suburbs that are clean compared with the home surroundings of the average city worker, and also Portland water is extremely soft and therefore requires a minimum of soap and cleansing powder.

The cost of a reasonable family budget for a family including husband, wife, a boy of 12, a girl of 6, and a boy of 2 years, using the "actual" food budget, at the prices paid by the economical family of moderate means in Portland in January, 1924, was found to be $1,742.30. The cost of the principal groups of items of this family budget and the per cent of the total expenditure expended for each group are as follows:

AMOUNT AND PER CENT OF EXPENDITURE PER ANNUM FOR PRINCIPAL GROUPS OF ITEMS OF COST OF LIVING OF FAMILY OF FIVE, IN PORTLAND, OREG., JANUARY, 1924

Item of expenditure	Cost	Per cent of total expenditure
Food	$444.05	25.5
Clothing	414.33	23.8
Furniture and household furnishings	96.98	5.6
Housing	330.00	18.9
Heat and light	85.00	4.9
Miscellaneous (school, papers, books, magazines, church, dues, recreation, charity, vacation, toys, telephone, dentistry, doctor, etc.; also cleaning supplies, $23.84)[1]	371.94	21.3
Total	1,742.30	100.0

[1] Exclusive of insurance or savings.

A comparison of the present study and figures for Portland for December, 1914, published by the United States Bureau of Labor Statistics, shows marked differences in the percentages of total expenditure given for the separate groups, as will be seen by the following table:

PER CENT OF TOTAL ANNUAL EXPENDITURE FOR PRINCIPAL GROUPS OF ITEMS OF COST OF LIVING OF FAMILY OF FIVE IN PORTLAND, OREG., IN DECEMBER, 1914, AND IN JANUARY, 1924

Item of expenditure	Per cent of total expenditure	
	December, 1914 (U. S. Bureau of Labor Statistics' figures)[1]	January, 1924 (Portland study)
Food	34.3	25.5
Clothing	16.1	23.8
Housing	12.8	18.9
Fuel and light	4.9	4.9
Furniture and furnishings	6.1	5.6
Miscellaneous[2]	25.7	21.3
Total	100.0	100.0

[1] MONTHLY LABOR REVIEW, February, 1924, p. 88.
[2] Exclusive of insurance and savings.

The difference in the percentages shown for 1914 and 1924 for the different groups of items is largely accounted for by the difference in price levels of the various items in the two years. Between December, 1914, and December, 1923, the cost of food in Portland advanced 35.1 per cent (MONTHLY LABOR REVIEW, February, 1924, p. 88), while the advance in the cost of clothing was 61.8 per cent, and of housing 42.7 per cent. As a result larger proportions of the total expenditure must be spent for clothing and housing in 1924 than in 1914.

Using the "ideal" food budget, and keeping all other expenditures the same, the cost of the family budget was found to be $1,859.98. The cost of the various groups of items and the per cent of total expenditure for each are as follows:

AMOUNT AND PER CENT OF EXPENDITURE PER ANNUM FOR PRINCIPAL GROUPS OF ITEMS OF COST-OF-LIVING OF FAMILY OF FIVE, IN PORTLAND, OREG., JANUARY, 1924

Item of expenditure	Cost	Per cent of total expenditure
Food	$561.73	30.2
Clothing	414.33	22.3
Furniture and household furnishings	96.98	5.2
Housing	330.00	17.8
Heat and light	85.00	4.6
Miscellaneous [1]	371.94	19.9
Total	1,859.98	100.0

[1] Exclusive of insurance and savings.

Cost of Living in Shanghai [1]

IN SHANGHAI, as in other parts of the world, there has been a steady increase in the cost of living during the past 25 years, but especially since 1913. Because of the unsettled conditions which have existed in the interior of China during the past decade, the Chinese population of Shanghai has had a constant growth. This increase in the population of the city, however, has caused living costs to mount, for it is necessary to import food into Shanghai from some distant country districts, with the resultant increase in transportation costs. The increase in the cost of labor, as well as the decline in the value of the silver and copper coins, has contributed to the rise in the cost of living. Added to this, poor crop years, excessive taxation, and the fact that the military in the interior have taken considerable of the crop production away from the Shanghai market are all factors in the increase of prices in Shanghai.

The following table computed from figures in the annual report of the Shanghai Municipal Council, 1923, shows the steady increase in the cost of some of the most common domestic articles in Shanghai during the period 1875 to 1923:

[1] From a report of the American Consulate at Shanghai, dated July 5, 1924.

INDEX NUMBERS OF RETAIL PRICES OF VARIOUS ARTICLES OF DOMESTIC CONSUMPTION IN SHANGHAI, 1875 TO 1923

[Price for 1913=100]

Item	1875	1900	1913	1917	1923
Beef	39	72	100	106	161
Fowls	58	74	100	105	158
Eggs	44	75	100	113	175
Snipe	59	82	100	88	100
Potatoes	80	75	100	120	170
Milk	56	67	100	111	139
Rice	36	45	100	92	161
Barley			100	89	149
Laundry		100	100	117	133
Coal, for domestic use		139	100	165	189

The advance in price is noted in all domestic articles of consumption. Pork increased 32 per cent from 1913 to 1923; oranges, 100 per cent; bran, 78.9 per cent; and flour, 44.3 per cent. Since 1916 rents have more than doubled, clothing is much more costly, and taxes are higher.

The introduction of foreign goods and foreign ideas into Shanghai has brought about a slow, almost unnoticeable increase in the Chinese standard of living.

WAGES AND HOURS OF LABOR

Salaries in the Police and Fire Departments of Specified Cities

IN APRIL, 1924, the Bureau of Labor Statistics sent questionnaires to the police and fire departments of all cities in the United States having a population of 100,000 or over according to the census of 1920, asking for the salary scale of their employees, with the number of persons receiving each specified salary. Nearly all the cities replied promptly to this request for information, and the few cities to which a second request was sent soon returned the questionnaires with the desired data.

The results of this study are shown in the accompanying tables.

Considerable difficulty has been experienced in making a satisfactory classification of employees on account of the different terms used and of the different uses of the same terms in different cities, and because of the differences in the organization of the departments.

No effort has been made to cover all employees in either the police or the fire departments. The object has been to give the salaries of the directing force, of the rank and file of the employees, and of such clerical and other employees as are most commonly found in these departments. In some cities the departments are much more elaborately organized than in others. This is often shown not so much in the active uniformed force as in the clerical and mechanical divisions. For example, as will be seen from the tabulation, some police departments have quite a large force of clerks and stenographers, other departments have a very few such employees, while still others report none at all, the patrolmen or lieutenants being detailed to this work. All such cases are noted in the tables. When no clerks are shown and no statement as to detail is given, it may probably be assumed that details to this work are made although no statement to that effect is given.

In classifying the members of the police departments, in the column headed "Salary of superintendent or chief," data are shown for the active head of the department. Some cities have a "police commission" or a "police commissioner" whose duties may, or may not, be the same as those of the person usually termed "chief" or "superintendent" in other cities. In such cases the salaries of these persons have been given and noted.

"Assistant or deputy chiefs" include the persons who have been so designated in the reports, also "chief inspectors" and "chief of detectives" which have been noted as such. In a few instances other officers have been included, but always with a note stating just what position the person holds. Inspectors, captains, lieutenants, and sergeants of detectives have been included with the regular police officials of the same rank. Policewomen have been included with patrolmen and properly noted.

In some cities we find chauffeurs carried as such on the rolls, while in other cities patrolmen or others are detailed to drive the chief's car, patrol wagons, and other vehicles in the service. Here also in a good many cases no report was made of chauffeurs or of others detailed to this work. In such cases, although presumptively there was such detail, no mention has been made of such fact.

In the fire departments of the various cities the classification is rather uniform in so far as chiefs and assistant or deputy chiefs are concerned, although in a few of the smaller cities none of the latter are found. The subdivisions of the departments are variously reported as departments, districts, or battalions. Some cities have no "fire marshal," but have "fire wardens," "inspector of combustibles," "fire-prevention officers," "chiefs of fire-prevention bureaus," etc., whose duties are more or less similar to those of a fire marshal. These persons have been grouped with fire marshals in the tables. In some cases the fire marshal's duties are performed by the chief of the department. Superintendents of machinery include "master mechanics," "chief machinists," "superintendents of repairs," "chief mechanicians," "supervising engineers," and others who have general charge of the apparatus and machinery.

"Privates (firemen)" include the rank and file of the fire fighters by whatever name known, as hose men, ladder men, etc.

The data for "engineers (pumpers)" are not satisfactory. With the old-fashioned horse-drawn steam pumps an engineer was necessary, whose duties were to keep his engine in working order and pump water on a fire. With the advent of the motor-driven gasoline engine the engineer has been replaced, usually by the chauffeur or by privates detailed to operate the pumps. In many cases a very small number of engineers have been reported, with the explanation that a few of the old-style engines are still in use or that former engineers have been retained in the service under the old designation, although their duties had been changed. In a number of cases no engineers are reported, the statement sometimes being made that "chauffeurs act," or that "privates are detailed." This is presumably the case in other instances where no note is made.

A similar condition obtains with reference to chauffeurs. In a few cases the statement is made that privates are detailed; in other cases, however, nothing is said, but the presumption is that the positions are filled by detail.

Because of these differences with reference to engineers and chauffeurs it is difficult to make satisfactory comparisons. A comparison between cities can best be made by combining privates, engineers, and chauffeurs in one group. This will give the total number of "fire fighters" working under the captains and lieutenants.

In a number of cities increases in salaries have been made since the figures shown in these tables were reported, but it was thought best to show the data as of a uniform date. The salaries given are those in effect in April, 1924.

TABLE 1.—SALARIES OF EMPLOYEES IN THE POLICE DEPARTMENTS OF SPECIFIED CITIES

City and State	Salary of superintendent or chief	Assistant or deputy chiefs		Matrons		Salary of—			Clerks and stenographers			
		Number	Salary	Number	Salary	Chief clerk or secretary	Secretary to chief	Property clerk	Number	Salary		
										Highest	Lowest	Average
Akron, Ohio	$4,050	[1] 1	$2,640	2	$1,020		$2,800		5	$1,250	$1,250	$1,250
Albany, N. Y	3,500	1	3,000			[2]						
Atlanta, Ga	4,000	1	2,100	[3] 3	1,560		2,100		9	1,740	1,380	1,560
				[4] 2	780							
Baltimore, Md	[5] 10,000			1	1,495		[6] 5,250		29	2,530	1,560	1,706
	[7] 4,000			1	1,463		[8] 2,588					
				4	1,430							
				7	1,398							
				1	1,365							
				1	1,333							
				3	1,300							
Birmingham, Ala	4,800	1	3,000	2	1,620		2,100	$2,100				
Boston, Mass	[5] 8,000	1	4,025	1	1,700	$3,100	[6] 5,000	[9]	29	3,100	960	1,705
	[10] 7,000	2	4,000	1	1,500							
		[7] 1	3,800	3	1,300							
Bridgeport, Conn	5,000	1	3,500	1	1,000	[9]	[11]		[12]			
Buffalo, N. Y	5,500	1	4,000	4	1,200	2,580		2,580	1	1,800	1,800	1,800
		[1] 1	3,000									
Cambridge, Mass	3,750						2,300					
Camden, N. J	3,000					2,340						
Chicago, Ill	10,000	3	7,500	34	1,560	2,700		3,100	51	2,580	1,680	1,925
Cincinnati, Ohio	6,000			1	1,100			2,000	4	1,750	1,500	1,688
				3	1,000							
Cleveland, Ohio	5,500			4	1,080	2,981		[13] 2,004				
Columbus, Ohio	3,470			3	1,740		2,305	[12]	6	1,680	1,680	1,680
Dallas, Tex	3,600	1	2,670				1,460		2	1,460	1,460	1,460
Dayton, Ohio	3,000			3	750	1,550	1,150	1,350	1	1,320	1,320	1,320
Denver, Colo	3,600	1	3,000	3	1,800		2,160	2,160	2	1,920	1,920	1,920
Des Moines, Iowa	3,220	[14] 2	2,460	3	1,640	2,220	1,640		3	1,640	1,200	1,347
Detroit, Mich	6,000	[14] 2	4,500	9	1,560	2,600	2,220	[2]	28	2,100	1,400	1,777
		[1] 1	4,000									
Fall River, Mass	4,000	1	3,150	2	1,095	2,400	1,274					
Fort Worth, Tex	2,500			1	1,440		1,740	1,500	2	1,500	1,500	1,500
Grand Rapids, Mich	3,700			1	1,460		1,200		6	1,565	1,460	1,495
Hartford, Conn	4,950			1	919	2,530	1,850		1	1,500	1,500	1,500
Houston, Tex	4,000	[1] 1	2,700	1	1,710		2,100	1,890	7	1,880	1,500	1,554
		1	2,520									
Indianapolis, Ind	4,000			3	1,734	2,200	2,200	2,000				
Jersey City, N. J	5,500	1	5,000	10	1,000	4,000	2,450	2,500	2	2,500	2,500	2,500
Kansas City, Kans	2,700			1	1,300		1,920					
				1	1,200							
				4	1,200	2,100	1,800	2,400	34	2,100	1,500	1,609

Indianapolis, Ind	4,000	1	2,520	3	1,734	2,200	2,200	2,000		7	1,880	1,500	1,554
Jersey City, N. J	5,500	1	5,000	10	1,000	4,000	2,450	2,500		2	2,500	2,500	2,500
Kansas City, Kans	2,700			1	1,300		1,920						
				1	1,200								
Kansas City, Mo	5,000			4	1,200	2,100	1,800	2,400		34	2,100	1,500	1,609
Los Angeles, Calif	6,000			[15] 1	2,220		3,000	[11]		46	1,920	1,500	1,680
Louisville, Ky	4,000	1	2,500				2,400	1,460		3	1,460	1,000	1,220
Lowell, Mass	3,500	1	2,500	1	1,050					1	1,500	1,500	1,500
Memphis, Tenn	4,800			1	1,500	3,000	[16]	[16]		9	1,800	1,500	1,720
Milwaukee, Wis	5,500	1	3,420	1	1,320	2,760				4	1,860	1,680	1,725
Minneapolis, Minn	5,000			1	1,918	[17] 2,400	2,400			6	1,800	1,200	1,660
Nashville, Tenn	4,000			1	960		1,560						
Newark, N. J	5,400	1	4,400	17	1,440	3,600	[7]	2,280		14	3,000	1,380	2,104
New Bedford, Mass	3,500	1	3,197	1	1,303	2,281	1,820			2	1,300	936	1,118
New Haven, Conn	4,500			1	1,200	1,500	1,040	1,500					
New Orleans, La	5,000	[1] 1	3,375	8	1,050		2,665			54	2,250	1,260	1,600
		1	2,625										
New York, N. Y	[3] 10,000	[7] 1	7,500			4,100	4,500	3,140		58	3,500	1,372	2,052
		5	6,500										
		[18] 1	4,900										
Norfolk, Va	3,600			2	1,200	2,400		2,100		2	1,800	1,800	1,800
Oakland, Calif	3,960			4	1,500	2,178	2,280	2,178					
Omaha, Nebr	4,000			1	2,040	1,980	1,980	2,160		2	1,800	1,800	1,800
Paterson, N. J	3,800			1	1,000		2,020	[19]					
Philadelphia, Pa	5,000	1	4,200	2	1,320	2,675	2,568	[20] 1,980		45	2,200	1,200	1,337
				24	1,080								
Pittsburgh, Pa	5,000	1	3,600	16	1,278	2,750				7	2,034	1,554	1,828
Portland, Oreg	3,900	[7] 1	3,120	3	1,536	2,400		[12]		10	1,632	1,200	1,343
		[22] 1	2,460										
Providence, R. I	[23] 3,000	1	3,640	1	988	3,380	1,560	1,664		4	1,976	988	1,320
	4,160	[7] 1	3,006	1	962								
Reading, Pa	2,400						1,560						
Richmond, Va	4,000			2	1,200	2,196	1,800	[10]		4	1,800	1,800	1,800
Rochester, N. Y	4,500	1	3,300	3	1,325			1,800		7	1,950	1,300	1,536
St. Louis, Mo	5,000	[14] 2	4,000	11	1,200	2,100	2,300	1,620		81	1,740	960	1,467
St. Paul, Minn	4,000			3	1,500	2,430				2	2,310	1,680	1,995
Salt Lake City, Utah	3,600			1	900		1,800	1,680					
San Antonio, Tex	3,000			3	1,320					1	1,860	1,860	1,860
San Francisco, Calif	[24] 1,200			4	1,800	3,000	[25] 2,400	3,000		2	3,000	2,400	2,700
	6,000												
Scranton, Pa	2,800			3	804	1,320	1,320	2,000					
Seattle, Wash	4,800			4	1,800	[26]	2,160	[26]		12	1,860	1,560	1,720
Spokane, Wash	3,104			3	1,380		1,986	1,800		1	1,440	1,440	1,440
Springfield, Mass	4,400	1	3,300	2	1,100	1,980				3	1,287	1,144	1,192
Syracuse, N. Y	4,800	1	2,800	3	1,200	2,100		1,800	[12]				
Toledo, Ohio	3,500			4	1,440	2,400		[12]		7	2,160	1,500	2,040

[1] Chief of detectives.
[2] Lieutenant detailed.
[3] White.
[4] Colored.
[5] Commissioner.
[6] Secretary to commissioner.
[7] Chief inspector.
[8] Secretary to chief inspector.
[9] Captain detailed.
[10] Superintendent.
[11] Sergeant detailed.
[12] Patrolmen detailed.
[13] Four at this rate.
[14] Including chief of detectives.
[15] City mother. (Cares for wayward girl cases.)
[16] Chief clerk acts.
[17] Two at this rate.
[18] Chief of detective bureau.
[19] Secretary to chief acts.
[20] Assistant clerk to superintendent.
[22] Superintendent, woman's protective division.
[23] Three commissioners at this rate.
[24] Four police commissioners at this rate.
[25] Secretary to commissioners.
[26] Lieutentant detailed performs duties of chief clerk and property clerk.

TABLE 1.—SALARIES OF EMPLOYEES IN THE POLICE DEPARTMENTS OF SPECIFIED CITIES—Continued

City and State	Salary of superintendent or chief	Assistant or deputy chiefs		Matrons		Salary of—			Clerks and stenographers			
		Number	Salary	Number	Salary	Chief clerk or secretary	Secretary to chief	Property clerk	Number	Salary		
										Highest	Lowest	Average
Trenton, N. J.	$4,000					$2,400	$2,400		3	$2,000	$1,800	$1,867
Washington, D. C.	4,500	2	$3,000	6	$960	2,640	2,040	[16]	18	1,740	940	1,240
Wilmington, Del.	3,600			3	1,000	[17]		[17]	1	1,250	1,250	1,250
Worcester, Mass.	4,250	1	3,250	3	1,500	2,062						
Yonkers, N. Y.	4,800	1	3,500	3	1,500				3	2,100	1,500	1,700
Youngstown, Ohio	3,600			1	1,200		2,040	1,980				

City and State	Inspectors		Captains		Lieutenants		Sergeants		Detectives		Patrolmen		Chauffeurs	
	Number	Salary	Number	Salary	Number	Salary	Number	Salary	Number	Salary	Number	Salary	Number	Salary
Akron, Ohio			4	$2,640	5	$2,280	12	$2,150	5	$2,280	102	$1,980	[12]	
											20	1,920		
											15	1,860		
											8	1,800		
											[28] 1	1,440		
Albany, N. Y.			7	2,400	5	2,200	22	2,100	7	2,200	110	1,900	3	$1,420
											11	1,800		
											50	1,700		
Atlanta, Ga.			5	1,980	6	1,860	12	1,770	30	1,740	202	1,680	[12]	
											23	1,620		
											36	1,560		
Baltimore, Md.	3	$3,500	1	3,432	11	2,571	22	2,033	1	1,677	47	1,794	8	1,398
			7	2,990	16	2,516	19	1,989	11	1,599	39	1,755	2	1,365
			4	2,925	18	2,460	54	1,945	13	1,560	101	1,716	5	1,333
			1	2,860	8	2,404	31	1,901			80	1,677	22	1,300
			1	2,795	7	2,348	51	1,856			[29] 105	1,638		
							16	1,812			[30] 160	1,599		
											129	1,560		
											258	1,430		
											232	1,300		
Birmingham, Ala.			6	2,100			2	1,740	24	1,920	77	1,620	6	1,560
											19	1,560		
											18	1,500		
											16	1,440		
Boston, Mass.	35	2,500	28	3,500	44	2,500	143	2,300	13	1,800	1,108	1,800	[12]	
											248	1,700		
											113	1,600		
											76	1,500		

[806]

Boston, Mass	35	2,500	28	3,500	44	2,500	143	2,300	13	1,800	1,108	1,800	(12)		
											248	1,700			
											113	1,600			
											76	1,500			
											177	1,400			
Bridgeport, Conn			7	3,000	15	2,700	36	2,250	2	2,000	214	2,000	(12)		
												1,900			
											1	1,800			
Buffalo, N. Y	2	3,000	14	2,580	1	2,580	44	2,040	38	1,920	647	1,800	(12)		
	[31] 1	2,280	[32] 2	2,340	64	2,100					9	1,740			
	[33] 1	2,100			53	1,920					38	1,620			
					6	1,800					19	1,560			
											[34] 104	1,500			
											[29] 1	1,260			
											150	2,008	4	2,008	
Cambridge, Mass			8	2,750	12	2,500	13	2,300			10	1,800			
											12	1,600			
Camden, N. J			1	2,220			12	1,980	10	1,980	126	1,800			
			4	2,160							3	1,680			
											8	1,560			
											22	1,440			
											25	1,380			
Chicago, Ill			1	5,000	3	3,400	800	2,400			3,187	2,000			
			35	3,500	91	2,700					1,290	1,760			
											[35] 273	1,640			
Cincinnati, Ohio	1	3,200			1	2,500	1	2,100	3	2,000	453	1,500			
	1	2,700			28	2,000	33	1,700	31	1,900	35	1,200			
							[36] 7	1,600							
Cleveland, Ohio	1	3,740	18	2,981	56	2,288	110	2,173	73	2,288	1,060	2,004	(12)		
Columbus, Ohio			1	2,640	5	2,280	8	2,160	25	1,930	190	1,920	(12)		
							[36] 25	1,980			30	1,820			
Dallas, Tex			1	2,460	1	2,070	10	1,770	18	1,710	120	1,560	2	1,560	
			4	2,100											
Dayton, Ohio	4	2,400					14	1,800	15	1,800	123	1,650	(12)		
											19	1,600			
											13	1,550			
Denver, Colo			8	2,700			19	2,160	36	2,100	168	1,920	(12)		
											44	1,860			
											50	1,800			
											10	1,740			
Des Moines, Iowa	1	2,220	3	2,220	2	2,100	6	1,980	18	1,980	85	1,920	3	1,920	
											15	1,640			
Detroit, Mich	[37] 21	3,000	4	2,750	51	2,650	63	2,400	81	2,210	[26] 1	2,300	70	2,160	
					59	2,600	109	2,350			1,216	2,160			
											[30] 174	2,000			
											103	1,900			
											[38] 15	1,800			
											[35] 3	1,500			

[12] Patrolmen detailed.
[16] Chief clerk acts.
[27] Captain detailed as chief clerk and property clerk.
[29] Policewoman.
[30] Including 3 policewomen.
[31] Including 2 policewomen.
[32] Chief of traffic.
[33] Assistant chiefs of detectives
[34] Chief of park police.
[36] Including 4 policewomen.
[36] Including 30 policewomen.
[36] Corporals.
[37] Including director of policewomen.
[38] Policewomen.

TABLE 1.—SALARIES OF EMPLOYEES IN THE POLICE DEPARTMENTS OF SPECIFIED CITIES—Continued

City and State	Inspectors		Captains		Lieutenants		Sergeants		Detectives		Patrolmen		Chauffeurs	
	Number	Salary	Number	Salary	Number	Salary	Number	Salary	Number	Salary	Number	Salary	Number	Salary
Fall River, Mass	7	$2,400	6	$2,700	10	$2,400	4	$2,250			[30] 145	$2,008	([12])	
											29	1,643		
Fort Worth, Tex	1	2,100	1	2,340	1	1,740	1	1,740	14	$1,740	91	1,500	([12])	
			3	1,860			4	1,680			17	1,320		
			1	1,800										
Grand Rapids, Mich			1	2,274	1	2,165	10	1,965	12	1,965	57	1,734	8	$1,774
											8	1,551	1	1,551
											48	1,460	3	1,460
Hartford, Conn			1	3,850	5	2,798	10	1,466			[29] 160	2,037	([12])	
							12	2,333			35	1,916		
Houston, Tex			3	2,220	1	1,900	4	1,890	24	1,710	2	1,890	4	1,530
							3	1,650			7	1,830	1	1,400
							[36] 1	1,710			18	1,800		
							[36] 1	1,650			1	1,770		
							[36] 1	1,590			1	1,740		
											3	1,710		
											1	1,680		
											81	1,470		
											3	1,410		
											11	1,290		
Indianapolis, Ind	1	3,100	8	2,400	21	2,200	25	2,000	45	2,000	125	1,800	([12])	
	1	3,000									[40] 271	1,734		
											12	1,575		
Jersey City, N. J	4	4,600	11	3,600	65	2,700	65	2,500	25	2,450	500	2,000	([12])	
Kansas City, Kans			2	2,100			13	1,860	13	1,860	4	1,700	9	1,700
											37	1,680		
											6	1,560		
											22	1,440		
Kansas City, Mo	1	2,400	5	3,000	9	2,400	39	2,100	36	2,100	17	1,800	56	1,500
											321	1,680		
											65	1,500		
											3	1,380		
Los Angeles, Calif	1	3,600	1	3,600	137	2,700	1	2,700			55	2,340	1	2,700
			11	3,300			114	2,340			[41] 425	2,040	9	1,800
			5	3,000							[34] 374	1,920	5	1,680
											[30] 489	1,800	9	1,560
											212	1,680		
Louisville, Ky			8	2,400	15	1,825	36	1,643	10	1,460	340	1,460	18	1,460
Lowell, Mass	1	2,250	3	2,500	5	2,250	8	2,100			151	1,825	6	1,825
Memphis, Tenn	1	4,200	2	2,400	6	2,100	18	1,920	4	1,740	131	1,680		
	1	3,600					11	1,860			17	1,500		
											12	1,440		
Milwaukee, Wis			1	3,140	8	2,640	3	2,400	51	2,340	493	1,860	([12])	
							40	2,140			57	1,800		

							40	2,140			57	1,800			
							16	1,980			135	1,740			
											[38] 2	1,500			
Minneapolis, Minn	1	3,600	1	3,300	6	2,280	39	2,160	60	2,400	239	2,040			
			1	3,000							64	1,920			
			1	2,760							70	1,800			
			5	2,400							[38] 3	2,040			
Nashville, Tenn					1	3,350	10	1,860	13	1,860	103	1,560	4	1,440	
					3	2,400									
Newark, N. J			12	3,400	53	2,600	66	2,300	([12])		856	2,000	([12])		
New Bedford, Mass			9	2,665	18	2,281	16	2,008			205	1,825	3	1,825	
New Haven, Conn			8	2,750			32	2,400	10	2,400	171	2,008	4	2,008	
											11	1,962			
												1,916			
											32	1,871			
											46	1,825			
New Orleans, La			1	3,375			3	1,875	23	1,875	57	1,680	17	1,500	
			1	2,520			[36] 6	1,800			44	1,572			
			16	2,250			10	1,725			257	1,500			
							[30] 32	1,575							
New York, N. Y	[42] 5	5,300	1	4,500	499	3,300	741	2,700	[42] 150	3,300	41	2,740	157	2,500	
	[42] 15	4,900	86	4,000					16	2,700	[44] 6,641	2,500			
	[42] 15	4,500	[42] 20	3,350					184	2,500	2	2,120			
									1	2,304	[46] 304	2,100			
											[30] 202	2,040			
											7	2,009			
											[43] 1,105	1,920			
											[47] 2,934	1,769			
Norfolk, Va	3	2,700	7	2,475	2	2,250	39	2,100			181	1,890	([12])		
											50	1,620			
											11	1,500			
Oakland, Calif	17	2,310	1	2,970	3	2,376	20	2,178	15	2,178	154	1,980	([12])		
			3	2,706			[36] 9	2,046			39	1,920			
											43	1,800			
Omaha, Nebr	1	3,000	8	2,280	2	2,160	18	2,040	30	2,040	87	1,800	7	1,680	
											17	1,680	1	1,560	
											41	1,560	1	1,200	
											25	1,200			
Paterson, N. J			5	2,800	3	2,400	9	2,220	8	2,020	81	1,900	4	1,800	
							16	2,100			2	1,800			
											32	1,700			
											23	1,600			
											14	1,500			
Philadelphia, Pa	7	2,550	1	2,790	3	2,460	123	2,050	29	2,110	4,111	1,825	97	1,825	
					50	2,300	203	1,950	50	1,900			6	1,300	
Pittsburgh, Pa	1	3,300			2	2,700	42	2,160	36	2,400	638	2,040	60	2,040	
	7	3,000			42	2,460			29	2,040	52	1,920	3	1,692	
											21	1,800			
											[38] 5	1,416			

[12] Patrolmen detailed.
[30] Including 2 policewomen.
[34] Including 4 policewomen.
[36] Corporals.
[38] Policewomen.
[40] Including 22 policewomen.
[41] Including 10 policewomen.
[42] Captains detailed with increased pay.
[43] Including 1 policewoman.
[44] Including 42 policewomen.
[46] Lieutenants acting as captains.
[46] Including 7 policewomen.
[47] Including 47 policewomen.

TABLE 1.—SALARIES OF EMPLOYEES IN THE POLICE DEPARTMENTS OF SPECIFIED CITIES—Concluded

City and State	Inspectors		Captains		Lieutenants		Sergeants		Detectives		Patrolmen		Chauffeurs	
	Number	Salary	Number	Salary	Number	Salary	Number	Salary	Number	Salary	Number	Salary	Number	Salary
Portland, Oreg.	[46] 1	$2,160	5	$2,460	3	$2,160	1	$2,280	30	$2,160	80	$1,980	[12]	
							3	2,100			1	1,920		
							19	1,980			[49] 169	1,860		
											4	1,800		
											7	1,740		
											3	1,680		
											22	1,560		
Providence, R. I.			9	2,730	24	2,281	29	2,098			307	1,916	21	$1,643
											63	1,825		
											[50] 1	1,820		
											24	1,734		
											28	1,643		
Reading, Pa.			1	2,100	1	1,800	9	1,740	6	1,740	73	1,680	3	1,440
											6	1,620		
											4	1,560		
Richmond, Va.			5	2,520	5	2,100	31	1,980	2	1,800	[43] 10	1,440		
											137	1,800	10	1,560
											24	1,680		
Rochester, N. Y.	1	2,800	1	3,200	8	2,300	3	2,450	20	2,225	30	1,560		
			8	2,500			22	2,000	5	1,920	[43] 152	1,800	3	1,800
St. Louis, Mo.	1	2,800	19	2,700	35	2,400	205	2,000			21	1,500		
											1,400	1,740	47	1,320
											4	1,680		
											[38] 17	1,500		
											150	1,380		
											35	1,320		
St. Paul, Minn.	1	2,754	1	2,754	5	2,304	[51] 2	2,357	41	1,944	20	2,297	21	1,680
			4	2,370			8	1,944			2	2,177		
							[51] 20	1,877			25	1,877		
											164	1,817		
											[38] 3	1,590		
											1	1,500		
Salt Lake City, Utah	1	2,700	1	2,700	1	1,860	6	1,920	8	1,740	6	1,680	7	1,620
			3	2,000			7	1,740			62	1,620		
											8	1,500		
											16	1,380		
San Antonio, Tex.			1	2,100			3	1,500	5	1,680	28	1,500		
			5	1,920					5	1,560	[39] 39	1,320		
									13	1,440	65	1,200		
San Francisco, Calif.			1	4,000	22	2,520	25	2,400			[39] 792	2,064	25	2,064
			10	3,000			79	2,280						
							[38] 53	2,160						
Scranton, Pa.			3	2,240	1	2,160	13	2,000	10	2,100	79	1,920	5	1,920
					3	2,100					23	1,800	1	1,680
											10	1,680		
											242	1,860	9	1,862

Scranton, Pa.			3	2,240	1	2,160	13	2,000	10	2,100	79	1,920	5	1,920
					3	2,100					23	1,800	1	1,680
											10	1,680		
Seattle, Wash.	1	3,120	1	3,120	13	2,340	34	2,100	40	2,100	243	1,860	9	1,860
			8	2,700							[53] 40	1,800		
											50	1,740		
											60	1,620		
Spokane, Wash.			1	2,244			8	1,860	11	1,860	49	1,728	5	1,728
			3	2,118							8	1,590		
											11	1,440		
Springfield, Mass.			1	2,695	13	2,365	13	2,255			156	2,117	(12)	
			3	2,585							10	2,008		
											19	1,880		
											[38] 2	1,862		
											33	1,606		
Syracuse, N. Y.			1	2,500	2	2,100	10	1,900	15	2,100	160	1,800	(12)	
											21	1,740		
											28	1,680		
											10	1,620		
											16	1,560		
Toledo, Ohio	2	2,700	6	2,400	6	2,220	14	2,100	18	2,220	316	1,800	(12)	
Trenton, N. J.			4	3,200			1	2,400	6	2,250	[30] 85	2,000	2	2,000
							7	2,300			10	1,900	2	1,800
							[51] 7	2,250			22	1,800	2	1,700
											13	1,700		
											10	1,600		
											15	1,550		
Washington, D. C.	1	2,800	13	2,640	1	2,640	56	2,040	35	2,380	566	1,900	35	1,800
	2	2,640			20	2,240			14	2,020	232	1,800	3	1,700
											50	1,700	2	1,020
Wilmington, Del.			5	2,200	1	2,000	17	1,800	13	1,700	101	1,500	1	960
											36	1,400		
Worcester, Mass.			6	2,750	20	2,550	22	2,350			270	2,062	3	2,062
											20	1,786		
Yonkers, N. Y.			5	3,400	16	3,000	17	2,500	10	2,300	128	2,300	(12)	
											9	2,000		
											45	1,900		
											10	1,800		
Youngstown, Ohio	2	2,460	4	2,220			7	1,980	12	2,040	66	1,800	6	1,800
											[28] 1	1,500		

[12] Patrolmen detailed.
[28] Policewoman.
[30] Including 2 policewomen.
[36] Corporals.
[38] Policewomen.
[43] Including 1 policewoman.
[46] Assistant chief, women's protective division.
[49] Including 6 in women's protective division.
[50] Woman protective officer.
[51] Roundsmen.
[52] Including 5 policewomen.

TABLE 2.—SALARIES OF EMPLOYEES OF THE FIRE DEPARTMENTS OF SPECIFIED CITIES

City and State	Salary of chief	Assistant or deputy chiefs		Department, district, or battalion chiefs		Salary of—			
		Number	Salary	Number	Salary	Fire marshal	Chief clerk or secretary	Superintendent of machinery	Assistant superintendent of machinery
Akron, Ohio	$4,050	1	$2,904			$2,400	$2,160	$2,700	$2,280
		1	2,784			[1] 2,280			
Albany, N. Y.	3,500			3	$2,300			2,400	2,100
Atlanta, Ga.	4,000	1	2,400			1,950	2,640	2,160	1,800
		5	2,220			[1] 1,800			
Baltimore, Md.	4,500	2	3,500	13	2,500		2,500	2,500	[2] 2,100
Birmingham, Ala.	3,600	1	2,700	2	2,520	[3] 1,860	1,920	2,400	2,100
		1	2,640						
Boston, Mass.	5,500	7	4,000	30	3,500	2,500	2,500	3,500	2,700
Bridgeport, Conn.	5,000	4	3,000				3,000	3,250	2,700
Buffalo, N. Y.	5,500	2	3,486	8	2,772		3,000	2,772	
				3	2,580				
Cambridge, Mass.	3,750	2	2,900						
Camden, N. J.	3,000	2	2,600	2	2,280	[4]	1,680	1,980	
Chicago, Ill.	8,000	1	6,500	53	3,500				
		1	5,000						
		1	4,700						
		9	4,200						
Cincinnati, Ohio	6,000					3,500		3,000	
						3,200			2,500
Cleveland, Ohio	5,500	1	3,740	25	2,981	2,981	2,300	3,362	2,981
		1	3,362			[5] 2,345			
Columbus, Ohio	3,470	2	2,640	5	2,160		2,305	2,580	
Dallas, Tex.	3,600	1	2,400	4	1,920	2,100	2,400	2,310	1,980
		1	2,280						1,800
		1	2,010						
Dayton, Ohio	3,000			5	2,420		1,860	1,920	
Denver, Colo.	4,200	1	3,300	10	3,000	[6] 1,920	2,580		
Des Moines, Iowa	3,720	4	2,820			2,940	2,280	2,280	1,920
Detroit, Mich.	6,000	1	4,500	14	3,600	4,000	3,000	5,000	3,100
		1	3,900						2,600
Fort Worth, Tex.	2,400	2	2,100	4	1,800	1,920	1,800	1,980	1,800
Fall River, Mass.	3,850	1	3,080	2	2,750			2,508	
		1	2,750						
Grand Rapids, Mich.	3,700	1	2,750	3	2,300			2,491	
Hartford, Conn.	4,950	1	3,850	4	2,665	[4]	3,080	3,065	2,665
Houston, Tex.	3,600	1	2,580			2,100	2,400	1,770	
		1	2,100						
		1	1,980						
Indianapolis, Ind.	4,000	2	3,000	8	2,400	[7]	2,200	2,200	2,000
		1	2,880						
Jersey City, N. J.	5,500	2	4,500	7	3,500		3,500	3,500	[2] 2,700
Kansas City, Kans.	3,000	1	2,500				[7]	2,400	1,980
		3	2,400						
Kansas City, Mo.	4,700	1	3,600	8	2,610	2,610	3,000	2,400	
		1	3,050			[8] 1,895			
Los Angeles, Calif.	6,000	3	3,900	19	3,300		2,640	3,000	
Louisville, Ky.	4,000	1	3,000	5	2,500	1,800	1,800	2,250	
Lowell, Mass.	3,500	1	2,500	1	2,300		1,539	[9]	
		2	2,300						
Memphis, Tenn.	4,800	1	2,600	3	2,500	2,100	2,400	2,700	
						[1] 1,860			
Milwaukee, Wis.	5,500	1	3,420	11	2,940		2,760	2,940	
Minneapolis, Minn.	5,000	1	3,600	5	2,880	2,880	3,120	3,120	
		1	3,300			[10] 2,520			
		2	3,000						
Nashville, Tenn.	4,000	1	3,300				1,500	2,400	1,920
		1	2,400						
Newark, N. J.	5,400	2	4,400	12	3,400	3,250	3,600	4,200	
							[2] 2,280		
New Bedford, Mass.	3,500	1	2,800	3	2,500		1,825	2,373	
New Haven, Conn.	4,500	4	2,555			3,000	1,500	2,555	
						[1] 2,190			
New Orleans, La.	5,000	1	3,375	11	2,625			2,625	[1] 1,865
New York, N. Y.	10,000	3	6,500	47	4,490	6,000		4,610	
		13	5,500			[11] 4,100			
Norfolk, Va.	3,600	1	2,700	3	2,437		2,100	2,437	2,250

[1] Assistant. [2] Two at this rate. [3] Three at this rate. [4] Chief acts.
[5] Fourteen assistants at this rate. [6] Two fire inspectors at this rate. [7] Assistant chief acts.
[8] Two assistants at this rate. [9] Captain detailed. [10] Four assistants at this rate.
[11] Assistant; 21 additional assistants at salaries ranging from $1,800 to $2,976.

TABLE 2.—SALARIES OF EMPLOYEES OF THE FIRE DEPARTMENTS OF SPECIFIED CITIES—Continued

City and State	Salary of chief	Assistant or deputy chiefs		Department, district, or battalion chiefs		Salary of—			
		Number	Salary	Number	Salary	Fire marshal	Chief clerk or secretary	Superintendent of machinery	Assistant superintendent of machinery
Oakland, Calif.	$3,960	2	$3,102	7	$2,574	.....	$2,160	$2,904	.....
Omaha, Nebr.	4,500	2	3,500	5	3,000	$2,000	2,000	3,000	$1,920
Paterson, N. J.	3,800	1	2,800	4	2,600	.....	.....	2,300	2,200
Philadelphia, Pa.	5,000	1	3,500	11	2,500	3,000	1,600	2,500	[2] 1,800
	.....	.....	.....	.....	.....	[10] 2,000	.....	.....	.....
Pittsburgh, Pa.	5,000	1	3,500	6	3,000	.....	2,940	3,600	.....
Portland, Oreg.	3,900	1	2,880	3	2,520	(7)	2,400	2,400	.....
	.....	1	2,520	.....	.....	.....	.....	.....	.....
Providence, R. I.	3,640	2	3,120	6	2,860	.....	3,380	2,457	2,093
Reading, Pa.[12]	2,100	2	1,020	.....	.....	.....	.....	1,800	1,500
	.....	.....	.....	.....	.....	.....	.....	.....	1,200
Richmond, Va.	3,500	1	3,000	4	2,424	.....	1,620	2,460	2,100
Rochester, N. Y.	4,500	1	3,300	8	2,500	.....	2,400	2,400	2,100
St. Louis, Mo.	5,000	1	3,600	11	3,000	.....	2,880	3,000	.....
St. Paul, Minn.	4,000	1	3,240	8	2,754	1,920	.....	3,120	2,370
Salt Lake City, Utah	3,600	1	2,160	1	2,100	.....	1,800	2,400	1,800
San Antonio, Tex.	3,000	1	2,100	4	1,560	2,400	1,800	2,100	.....
	.....	1	1,920	.....	.....	.....	.....	.....	.....
	.....	1	1,800	.....	.....	.....	.....	.....	.....
	.....	1	1,680	.....	.....	.....	.....	.....	.....
San Francisco, Calif.	5,360	1	3,960	16	3,060	.....	3,900	3,600	3,099
	.....	1	3,360	.....	.....	.....	.....	.....	.....
Scranton, Pa.	2,800	2	2,400	.....	.....	2,040	1,600	2,040	1,860
Seattle, Wash.	4,800	2	3,120	9	2,700	3,000	2,760	2,760	2,460
Spokane, Wash.	3,105	2	2,415	.....	.....	.....	1,986	2,240	.....
Springfield, Mass.	4,400	2	3,410	6	2,915	.....	1,936	2,640	2,365
Syracuse, N. Y.	4,000	2	2,800	7	2,700	2,200	1,400	2,400	1,950
Toledo, Ohio	3,500	1	3,000	5	2,500	.....	2,400	2,280	.....
	.....	1	2,700	.....	.....	.....	.....	.....	.....
Trenton, N. J.	4,000	3	3,200	1	2,900	.....	3,000	2,800	2,350
Washington, D. C.	4,000	2	3,000	8	2,640	2,640	2,640	2,740	2,240
	.....	.....	.....	.....	.....	[1] 2,240	.....	.....	.....
Wilmington, Del.	3,000	1	2,300	.....	.....	2,100	1,700	1,900	.....
	.....	2	2,100	.....	.....	.....	.....	.....	.....
Worcester, Mass.	4,250	2	3,250	.....	.....	.....	2,080	2,701	2,427
	.....	4	2,750	.....	.....	.....	.....	.....	.....
Yonkers, N. Y.	4,500	3	3,400	.....	.....	(4)	2,100	(3)	.....
Youngstown, Ohio	3,300	3	2,200	.....	.....	1,980	2,200	2,040	[2] 1,980

City and State	Captains		Lieutenants		Privates (firemen)		Engineers (pumpers) and assistants		Drivers or chauffeurs	
	Number	Salary	Number	Salary	Number	Salary	Number	Salary	Number	Salary
Akron, Ohio	22	$2,280	.....	.....	95	$1,980	4	$2,100	(14)	.....
	.....	.....	.....	.....	12	1,920	[13] 4	2,040	.....	.....
	.....	.....	.....	.....	3	1,860	.....	.....	.....	.....
	.....	.....	.....	.....	6	1,800	.....	.....	.....	.....
Albany, N. Y.	14	2,150	14	$2,050	156	1,800	7	1,850	(14)	.....
	.....	.....	.....	.....	7	1,700	.....	.....	.....	.....
	.....	.....	.....	.....	3	1,500	.....	.....	.....	.....
Atlanta, Ga.	19	1,950	19	1,890	92	1,680	.....	.....	59	$1,800
	.....	.....	.....	.....	18	1,620	.....	.....	.....	.....
	.....	.....	.....	.....	23	1,560	.....	.....	.....	.....
	.....	.....	.....	.....	19	1,500	.....	.....	.....	.....
Baltimore, Md.	84	1,800	89	1,675	730	1,500	51	1,750	(14)	.....
	.....	.....	.....	.....	[15] 22	1,500	[13] 41	1,600	.....	.....
	.....	.....	.....	.....	.....	.....	[15] 4	1,765	.....	.....
Birmingham, Ala.	23	1,860	23	1,800	108	1,620	3	1,860	.....	.....
	.....	.....	.....	.....	15	1,560	[13] 3	1,800	.....	.....
	.....	.....	.....	.....	21	1,500	.....	.....	.....	.....
	.....	.....	.....	.....	10	1,440	.....	.....	.....	.....

[1] Assistant.
[2] Two at this rate.
[4] Chief acts.
[7] Assistant chief acts.
[10] Four assistants at this rate.
[12] Volunteer department.
[13] Assistants.
[14] Privates detailed.
[15] Marine

TABLE 2.—SALARIES OF EMPLOYEES OF THE FIRE DEPARTMENTS OF SPECIFIED CITIES—Continued

City and State	Captains		Lieutenants		Privates (firemen)		Engineers (pumpers) and assistants		Drivers or chauffeurs	
	Number	Salary	Number	Salary	Number	Salary	Number	Salary	Number	Salary
Boston, Mass.	74	$2,500	110	$2,300	769	$1,800	50	$1,900	(14)	
					28	1,700	[13] 52	1,800		
					32	1,600	[13] 3	2,000		
					23	1,500				
					242	1,400				
Bridgeport, Conn.	27	2,700	29	2,250	176	2,000	12	2,250	(16)	
							[13] 12	2,000		
Buffalo, N. Y.	50	2,400	47	2,100	718	1,800	26	1,920	(14)	
	6	2,160	7	2,040			[15] 3	2,040		
							[15] 6	1,920		
Cambridge, Mass.	15	2,750	15	2,500	119	2,008	6	2,300	(14)	
					4	1,800	[15] 3	2,250		
					3	1,600				
Camden, N. J.	15	2,160			20	1,800	11	1,980	41	$1,800
	15	1,920			62	1,740				
					2	1,680				
					10	1,440				
					5	1,380				
Chicago, Ill.	190	2,700	241	2,400	1,289	2,000	107	2,380	(14)	
					46	1,940	[13] 8	2,520		
					108	1,820	[13] 151	2,330		
					37	1,640				
Cincinnati, Ohio	55	1,850	51	1,750	304	1,500	39	1,700	62	1,560
						1,400	[13] 33	1,650		
					25	1,300				
Cleveland, Ohio	60	2,288	87	2,173	702	2,094	[15] 4	2,520		
					48	1,701	45	2,270	(14)	
							[13] 46	2,140		
Columbus, Ohio	35	2,065	17	1,980	280	1,920	11	2,065	(14)	
							[13] 13	1,980		
Dallas, Tex.	60	1,740			100	1,560	38	1,710	2	1,590
		1,710			20	1,380			32	1,560
					60	1,300				
Dayton, Ohio	10	1,860	31	1,740	114	1,620				
					7	1,560				
					8	1,500				
Denver, Colo.	24	2,160	28	2,040	140	1,920	13	2,040	(14)	
					20	1,860	[13] 7	1,950		
					40	1,800				
					10	1,740				
Des Moines, Iowa	10	2,280	20	2,100	148	1,920			(14)	
					12	1,740				
Detroit, Mich.	77	2,600	81	2,400	874	2,160	92	2,320	(14)	
					55	1,960	[15] 5	2,600		
					38	1,840				
Fort Worth, Tex.	18	1,680	22	1,560	84	1,440	(17)		50	1,440
					20	1,320				
					10	1,200				
Fall River, Mass.	17	2,358	17	2,157	133	2,008	1	2,059	(14)	
					14	1,606				
Grand Rapids, Mich.	17	2,008	19	1,916	170	1,825	13	1,916	(14)	
					20	1,643	[13] 11	1,825		
					9	1,551				
Hartford, Conn.	30	2,266	10	2,133	170	2,000	26	2,199		
						1,801				
Houston, Tex.	10	1,800			81	1,470	(17)		53	1,590
	20	1,680			2	1,380				
					32	1,320				
					22	1,200				
Indianapolis, Ind.	44	2,200	62	2,000	331	1,734	6	1,800	123	1,800
					26	1,551				
Jersey City, N. J.	65	2,700			352	2,000	7	2,000	(14)	
					119	1,700				
Kansas City, Kans.	24	1,800			56	1,680	5	1,800	16	1,680
					2	1,620				
					2	1,560				
					5	1,500				
Kansas City, Mo.	39	1,895	39	1,752	176	1,620	8	1,752	97	1,680
					23	1,560	3	1,680		
Los Angeles, Calif.	71	2,340	96	2,340	316	2,040	120	2,280	137	2,040
					58	1,920				
					71	1,800				
					350	1,680				

[13] Assistants.
[14] Privates detailed.
[15] Marine.
[16] Lieutenants and privates detailed.
[17] Chauffeurs act.

TABLE 2.—SALARIES OF EMPLOYEES OF THE FIRE DEPARTMENTS OF SPECIFIED CITIES—Continued

City and State	Captains		Lieutenants		Privates (firemen)		Engineers (pumpers) and assistants		Drivers or chauffeurs	
	Number	Salary	Number	Salary	Number	Salary	Number	Salary	Number	Salary
Louisville, Ky	31	$1,643	31	$1,533	229	$1,460	22	$1,533	[14]	
Lowell, Mass	1	2,245	20	1,935	85	1,825	4	1,935	46	$1,825
	17	2,037			1	1,643				
					7	1,460				
Memphis, Tenn	38	1,800	36	1,740	110	1,680	[17]		48	1,740
					20	1,500				
Milwaukee, Wis	42	2,240	47	2,100	[15] 10	1,980	29	2,100		
					420	1,860	[15] 7	2,100		
					29	1,800	[13] 27	1,980		
					13	1,740				
Minneapolis, Minn	46	2,280	41	2,220	248	2,040	15	2,160	81	2,100
					11	1,920	[13] 16	2,100		
					5	1,800				
Nashville, Tenn	17	1,800	17	1,740	96	1,560	17	1,740	3	1,620
							[13] 17	1,680		
Newark, N. J	89	2,600			550	2,000	[15] 3	2,520	[14]	
					74	1,900				
					37	1,800				
New Bedford, Mass	16	2,219	16	2,081	135	1,825	[17]		33	1,935
					1	1,679				
					1	1,551				
New Haven, Conn	20	2,373	9	2,099	178	2,008	3	2,099		
	11	2,190			6	1,916				
					32	1,825				
New Orleans, La	58	1,800	58	1,500	334	1,500	16	1,725	68	1,575
					33	1,350				
					13	1,200				
New York, N. Y	300	3,700	501	3,200	4,232	2,500	343	2,720	[14]	
					103	2,280	[15] 3	2,700		
					300	1,769	[15] 13	2,400		
Norfolk, Va	40	2,100			70	1,890	32	2,003	38	1,890
					[15] 2	1,890	[15] 2	2,003		
					17	1,620				
					94	1,500				
Oakland, Calif	25	2,310	25	2,178	208	1,980	39	2,178	9	2,046
					6	1,920				
					17	1,800				
Omaha, Nebr	29	2,100			146	1,800	[17]		68	1,800
	29	1,950			3	1,680				
					1	1,560				
					44	1,440				
Paterson, N. J	35	2,100			100	1,900	21	1,925	6	2,000
					2	1,800				
					34	1,700				
					11	1,600				
						1,500				
Philadelphia, Pa	87	2,100	91	2,000	1,530	1,825	60	1,875	[14]	
					[15] 12	1,560	[15] 6	1,875		
Pittsburgh, Pa	46	2,460	53	2,280	492	2,040	72	2,220	126	2,124
			27	2,250		1,920				
						1,800				
					[15] 38	2,040				
Portland, Oreg	29	2,100	39	1,980	236	1,860	18	1,920	[18]	
	7	2,040	6	1,920	13	1,740	[13] 11	1,860		
					12	1,680				
					11	1,620				
					39	1,560				
Providence, R. I	33	2,275	34	2,093	225	1,911	[17]		66	1,911
					13	1,820				
					86	1,729				
					15	1,638				

[13] Assistants. [14] Privates detailed. [15] Marine. [17] Chauffeurs act. [18] Engineers and privates act.

TABLE 2.—SALARIES OF EMPLOYEES OF THE FIRE DEPARTMENTS OF SPECIFIED CITIES—Concluded

City and State	Captains		Lieutenants		Privates (firemen)		Engineers (pumpers) and assistants		Drivers or chauffeurs	
	Number	Salary	Number	Salary	Number	Salary	Number	Salary	Number	Salary
Reading, Pa.[12]										
Richmond, Va.	23	$1,920			149	$1,620	34	$1,800	(14)	
	23	1,860			52	1,500				
					30	1,380				
Rochester, N. Y.	35	2,100	35	$2,000	375	1,800	14	1,900	(14)	
					18	1,500				
St. Louis, Mo.	78	2,220	78	1,980	460	1,860	55	1,980	134	$1,860
					62	1,560	[13] 55	1,860		
St. Paul, Minn.	35	1,944	35	1,877	271	1,680	29	1,817	64	1,680
							[13] 8	1,740		
Salt Lake City, Utah	8	1,920	9	1,680	60	1,620	(14)		(14)	
					13	1,500				
					14	1,380				
San Antonio, Tex.	15	1,500			123	1,200	6	1,260	22	1,260
	19	1,380							27	1,200
San Francisco, Calif.	78	2,460	101	2,310	513	2,040	33	2,280	18	2,160
					41	1,920	[15] 8	2,700	99	2,040
					25	1,800				
Scranton, Pa.	20	1,920	20	1,860	121	1,800	14	1,860		
					20	1,740				
					15	1,680				
Seattle, Wash.	47	2,340	48	2,100	299	1,860	4	2,100	(14)	
					113	1,800	[15] 4	2,100		
					43	1,740				
					2	1,620				
Spokane, Wash.	14	1,920	17	1,794	83	1,728	3	1,860	21	1,728
					5	1,590				
					5	1,440				
Springfield, Mass.	21	2,585	22	2,365	245	2,117	3	2,190	(14)	
					2	2,008				
					6	1,880				
Syracuse, N. Y.	24	1,980	23	1,960	179	1,800	11	1,930	(14)	
					7	1,740				
					30	1,680				
					10	1,620				
					14	1,560				
Toledo, Ohio	30	2,010	30	1,950	217	1,800	16	1,920	102	1,800
						1,650	[13] 15	1,860		
						1,500				
Trenton, N. J.	12	2,300	17	2,150	32	2,000	(14)		(14)	
					20	1,900				
					60	1,800				
					18	1,700				
					14	1,600				
					10	1,550				
Washington, D. C.	38	2,140	42	2,000	447	1,900	(14)		(14)	
			[19] 42	1,940	64	1,800	[13] 2	1,940		
					26	1,700				
					[13] 2	1,700				
Wilmington, Del.	12	1,900	12	1,800	99	1,500	18	1,600	(14)	
					13	1,400				
Worcester, Mass.	54	2,550	5	2,350	205	2,062	6	2,245	(14)	
					18	1,880				
Yonkers, N. Y.	16	2,700	14	2,500	79	2,300	(14)		(14)	
						2,000				
					25	1,900				
					13	1,800				
Youngstown, Ohio	14	1,980			54	1,800	14	1,980	[18]	

[12] Volunteer department.
[13] Assistants.
[14] Privates detailed.
[15] Marine.
[18] Engineers and privates act.
[19] Sergeants.

Wages in Georgia Industries, 1923

THE number of establishments and of employees in important industries in Georgia in 1923, as given in the twelfth annual report of the Commissioner of Commerce and Labor of Georgia (pp. 19–30), is as follows:

NUMBER OF ESTABLISHMENTS AND OF EMPLOYEES IN SPECIFIED INDUSTRIES IN GEORGIA IN 1923

Industry	Number of establishments	Number of employees		
		Whites	Negroes	Total
Brick, tile, sewer piping, cement and clay products	104			3,468
Compresses	30	202	325	527
Cotton-oil mills	[1] 84	[1] 1,102	[1] 1,574	[1] 2,676
Electric light and power plants	142	6,915	5,315	12,230
Fertilizer factories and mixing plants	181			3,850
Foundry, machine and general repair shops	191	10,978	2,760	13,738
Gas plants	19	678	122	800
Ice factories	112	808	902	1,710
Marble and granite quarries and marble yards	120	3,488	856	4,344
Textile mills	190	49,432	4,758	54,190
Buggies, wagons, etc., and materials	50	560	75	635

[1] Season Aug. 21, 1922, to July 31, 1923.

Weekly wages in the different occupations in specified industries in 1923 were as follows:

WEEKLY WAGES IN SPECIFIED INDUSTRIES IN GEORGIA IN 1923, BY OCCUPATIONS

Industry and occupation	Weekly wages
Brick, tile, sewer piping, cement and clay products:	
Electricians	$18.00–$50.00
Engineers	18.00–40.00
Firemen	14.00–25.00
Laborers	7.50–16.00
Machinists	20.00–35.00
Compresses:	
Engineers	[1] 80.00–140.00
Firemen	[1] 50.00–80.00
Laborers	[1] 36.00–48.00
Weighers	[1] 60.00–120.00
Cotton-oil mills: [2]	
Electricians	25.00–80.00
Engineers	25.00–60.00
Firemen	15.00–35.00
Laborers	12.00–18.00
Machinists	20.00–60.00
Timekeepers	18.00–30.00
Electric light and power plants:	
Bookkeepers	[1] 150.00–320.00
Car-house men	[1] 90.00–140.00
Clerks	[1] 90.00–180.00
Conductors	[1] 100.00–180.00
Electricians	[1] 100.00–200.00
Engineers	[1] 100.00–200.00
Firemen	[1] 75.00–140.00
Linemen	[1] 110.00–200.00
Machinists	[1] 120.00–240.00
Motormen	[1] 100.00–185.00
Power-house men	[1] 100.00–150.00
Salesmen	[1] 125.00–225.00
Stenographers	[1] 60.00–200.00
Substation men	[1] 100.00–180.00
Gas plants:	
Bookkeepers	[1] $150.00
Clerks	[1] 90.00
Laborers	[1] 50.00
Salesmen	[1] 160.00
Stenographers	[1] 100.00
Textile mills:	
Boarders	15.00
Carders	15.00
Dyers	11.00
Electricians	25.00
Engineers	36.00
Examiners	18.50
Finishers	20.00
Firemen	23.00
Knitters	14.00
Laborers	14.00
Loopers	12.50
Machinists	30.00
Sewers	13.50
Spinners and weavers	17.00–23.00
Buggies, wagons, etc., and materials:	
Assemblymen	20.00
Blacksmiths	18.00
Bookkeepers	85.00
Engineers	25.00
Firemen	15.00
Machinists	18.00
Painters	18.00
Polishers	22.00
Woodworkers	22.00

[1] Monthly wages.

[2] Season Aug. 31, 1922, to July 31, 1923.

Wages of Miners in Washington, 1923

THE following wage statistics for the mining industry in Washington are taken from the second report of the Department of Labor and Industries of that State:

DAY WAGE SCALE FOR VARIOUS MINING OCCUPATIONS IN WASHINGTON STATE IN 1923

Occupation	Union mines		Non-union mines, 1923
	Up to Apr. 1, 1923	After May 1, 1923	
Inside work			
Miners	$8.25	$7.50	$6.00
Timbermen	8.25	7.50	6.00
Timbermen's helpers	7.55	6.00	5.25
Tracklayers	8.25	7.50	6.00
Tracklayers' helpers	7.55	6.00	5.25
Motormen	7.75	6.25	5.50
Drivers	7.75	6.25	5.25
Parting boys	4.82	3.50	-------
Parting boys	5.32	4.00	-------
Greasers	4.77	3.50	-------
Trappers	4.52	3.25	5.25
Rope riders	7.75	6.25	5.50
Development work:			
Hoist men	7.55	6.00	5.25
Hoist boys	5.42	4.25	-------
Engineers, locomotive	7.75	-------	5.50
Cagers	7.75	6.25	5.50
Cagers' helpers	7.55	6.00	5.25
Labor not specified	7.55	6.00	5.25
Shot lighters	8.25	7.50	-------
Pumpmen	7.55	6.00	5.25
Outside work			
Engineers	8.00	6.50	6.00
Firemen	7.40	5.90	5.25
Cagers	7.50	6.00	5.25
Cagers' helpers	7.10	5.50	5.00

Occupation	Union mines		Non-union mines, 1923
	Up to Apr. 1, 1923	After May 1, 1923	
Outside work—Continued			
Teamsters	$7.25	$5.50	$5.00
Couplers	4.52	3.25	3.25
Greasers	4.37	3.25	3.25
Dumpers	7.10	5.60	5.00
Blacksmiths, first	8.05	7.00	6.00
Blacksmiths, second	7.75	6.25	5.50
Blacksmiths' helpers	7.25	5.50	5.00
Carpenters, first	8.05	7.00	5.75
Carpenters, second	7.55	6.00	5.25
Car repairer	7.25	5.75	5.00
Choppers	7.25	5.75	5.00
Screen men	6.75	5.00	4.50
Screen boys	4.72	3.50	3.50
Moving picking table:			
Men	6.75	5.00	4.50
Boys	4.72	3.50	3.50
Outside labor	7.00	5.00	4.50
Development engineers	7.50	6.00	5.25
Machinists, first class	8.05	6.75	6.00
Machinists, second class	7.75	6.00	5.50
Lampmen, first class	7.55	5.75	5.25
Lampmen, second class	7.00	5.25	4.75
Bunker machinery tenders	7.55	6.00	5.25
Washermen, first class	7.40	5.90	5.25
Washermen, second class	7.20	5.70	5.00
Jig and table tenders	7.00	5.50	4.75

Weekly Wage Rates in British Columbia, 1923[1]

RETURNS covering 3,375 firms of British Columbia showed the following weekly wage rates for wage earners in 1923 for the week in which the greatest number was employed:

[1] British Columbia. Department of Labor. Annual report for the year ended December 31, 1923. Victoria, 1924, p. 32.

CLASSIFIED WEEKLY WAGE RATES OF WAGE EARNERS IN BRITISH COLUMBIA, 1923, BY SEX

Wage rate for week of greatest employment	Males		Females		Apprentices
	18 years and over	Under 18 years	18 years and over	Under 18 years	
Under $6	23	35	15	22	65
$6 to $6.99	20	61	8	10	32
$7 to $7.99	25	65	11	5	39
$8 to $8.99	62	130	16	53	79
$9 to $9.99	62	91	32	41	49
$10 to $10.99	130	154	75	81	72
$11 to $11.99	314	84	101	37	52
$12 to $12.99	461	169	347	75	225
$13 to $13.99	648	97	480	54	72
$14 to $14.99	824	92	773	58	19
$15 to $15.99	1,417	98	769	25	21
$16 to $16.99	1,923	44	408	9	11
$17 to $17.99	2,078	30	266	9	28
$18 to $18.99	3,214	47	600	21	18
$19 to $19.99	3,411	29	237	----	25
$20 to $20.99	2,767	23	320	5	7
$21 to $21.99	5,593	27	162	4	8
$22 to $22.99	5,220	10	127	1	22
$23 to $23.99	2,660	----	58	----	3
$24 to $24.99	8,448	9	90	----	7
$25 to $25.99	3,719	6	138	3	10
$26 to $26.99	2,466	3	25	----	3
$27 to $27.99	4,842	----	23	----	----
$28 to $28.99	4,093	----	39	----	10
$29 to $29.99	2,414	----	11	----	----
$30 to $34.99	12,673	2	29	1	10
$35 to $39.99	9,016	3	10	----	3
$40 to $44.99	4,219	----	8	----	1
$45 to $49.99	2,119	----	----	----	----
$50 and over	3,278	----	----	----	----
Total	88,139	1,309	5,178	514	891

Hours Actually Worked by German Workers, May, 1924 [1]

THE new regulation of hours of labor in Germany by the decree of December 21, 1923,[2] while confirming anew the principle of the eight-hour day as the maximum "regular" working-day in industry, permits exceptional extension of the daily hours of labor up to 10 hours. As was to be expected, this regulation has encountered the strongest opposition on the part of the workers, manifesting itself in a number of serious labor disputes.

The provisions of the decree of December 21, 1923, make the working of longer than 8 hours per day chiefly dependent on the conclusion of collective agreements providing longer hours. These agreements, however, show, not the hours actually worked, but merely the maximum permissible overtime. In order to obtain some approximate idea as to the extent of overtime work the General Federation of German Free Trade Unions (*Allgemeiner Deutscher Gewerkschaftsbund*) made an inquiry during the week May 12 to 17, 1924. The inquiry, which was considered as a preliminary sounding, was limited to seven industry groups chosen from among the most important and was effected by means of questionnaires sent to local trade-union committees. From 533 of these committees returns were received, covering 46,122 establishments employing 2,453,523 persons. The results of the inquiry are given by district and also by industry group. In the following table are given the number of establishments and of persons working specified hours during the week in which the inquiry was made:

[1] Allgemeiner Deutscher Gewerschaftsbund. Gewerkschaftszeitung. Berlin, June 21, 1924, pp. 200–202.
[2] See MONTHLY LABOR REVIEW, March, 1924, pp. 85–87.

HOURS OF LABOR ACTUALLY WORKED IN GERMANY DURING THE WEEK ENDING MAY 17, 1924, BY DISTRICTS AND INDUSTRY GROUPS

District and industry group	Establishments covered	Workers covered	Less than 48 hours		48 hours	
			Establishments	Workers	Establishments	Workers
Baden, Wurttemberg, Hohenzollern, Palatinate	2,876	185,656	236	7,963	1,461	78,711
Bavaria	4,746	227,119	298	18,478	2,670	54,118
Rhineland, Westphalia, Lippe	9,216	479,702	419	18,036	4,710	71,983
Hesse, Hesse-Nassau, Waldeck	2,998	118,757	69	11,842	1,972	49,952
Thuringia and Erfurt	1,438	88,606	49	6,896	983	46,734
Saxony (Province), Anhalt	1,334	101,760	93	1,574	757	49,392
Saxony (free State)	6,778	373,129	731	38,147	3,644	117,084
Brandenburg, including Berlin	4,826	384,902	819	18,684	2,538	226,255
Silesia	2,569	127,447	59	10,589	1,582	50,650
Hanover, Brunswick, Bremen, Oldenburg	2,486	146,906	243	2,583	1,604	64,616
Hamburg, district of lower Elbe, Schleswig-Holstein, Lubeck, Mecklenburg	4,545	96,974	296	4,861	3,660	57,973
Pomerania	744	27,195	4	32	553	23,066
East Prussia	1,080	40,590	59	1,978	673	23,516
Sarre district	486	54,780	.....	.....	477	54,580
Total	46,122	2,453,523	3,375	141,663	27,284	968,650
Building trades	9,802	222,392	735	31,136	8,009	166,914
Printing trades	3,677	69,411	72	980	1,900	34,173
Chemical industry	1,391	196,080	53	3,377	632	106,466
Woodworking	12,369	219,077	1,617	27,404	9,276	144,863
Metal industry	13,390	1,269,399	466	49,199	5,950	414,377
Shoe industry	1,311	69,804	39	3,356	1,000	56,346
Textile industry	4,182	407,360	393	26,211	517	45,511
Total	46,122	2,453,523	3,375	141,663	27,284	968,650

District and industry group	Over 48 to 51 hours		Over 51 to 54 hours		Over 54 hours	
	Establishments	Workers	Establishments	Workers	Establishments	Workers
Baden, Wurttemberg, Hohenzollern, Palatinate	285	25,036	846	71,650	48	2,296
Bavaria	401	33,824	1,289	111,377	88	9,322
Rhineland, Westphalia, Lippe	310	38,272	2,422	122,307	1,355	229,106
Hesse, Hesse-Nassau, Waldeck	277	12,244	638	39,080	42	5,639
Thuringia and Erfurt	51	5,949	305	24,049	50	4,958
Saxony (Province), Anhalt	55	2,756	273	21,323	156	26,715
Saxony (free State)	481	43,226	1,855	168,202	67	6,470
Brandenburg, including Berlin	370	20,680	962	112,746	137	6,537
Silesia	81	6,447	747	48,983	100	10,773
Hanover, Brunswick, Bremen, Oldenburg	78	8,582	491	66,625	70	4,500
Hamburg, district of lower Elbe, Schleswig-Holstein, Lubeck, Mecklenburg	58	4,096	512	2[illegible],928	19	4,016
Pomerania	24	851	115	2,309	48	937
East Prussia	55	2,373	130	6,096	163	6,627
Sarre district	9	200	.....	.....	.....	.....
Total	2,535	204,536	10,585	820,775	2,343	317,890
Building trades	375	7,273	421	10,657	262	6,412
Printing trades	263	4,031	1,398	29,075	44	1,158
Chemical industry	56	5,487	504	65,415	146	15,333
Woodworking	434	14,926	707	21,878	335	10,009
Metal industry	731	73,576	4,797	465,070	1,446	267,177
Shoe industry	172	2,411	95	7,512	5	179
Textile industry	504	96,832	2,663	221,168	105	17,638
Total	2,535	204,536	10,585	820,775	2,343	317,890

In order that the significance of the figures given in the table preceding may be better recognized, there is shown in the following table the relative extent of overtime work in Germany during the week covered by the inquiry; i. e., the per cent of establishments and workers who worked in excess of the normal 48-hour week.

RELATIVE EXTENT OF OVERTIME WORK IN GERMANY DURING THE WEEK ENDING MAY 17, 1924, BY DISTRICTS AND INDUSTRY GROUPS

District and industry group	Per cent working—			
	Over 48 hours		Over 54 hours	
	Establishments	Workers	Establishments	Workers
Baden, Wurttemberg, Hohenzollern, Palatinate	41.0	53.3	1.7	1.2
Bavaria	37.4	68.0	1.9	4.1
Rhineland, Westphalia, Lippe	44.4	81.2	14.7	47.7
Hesse, Hesse-Nassau, Waldeck	31.9	47.9	1.4	4.7
Thuringia, and Erfurt	28.2	39.4	3.5	5.6
Saxony (province), Anhalt	36.3	50.0	11.7	26.3
Saxony (free State)	35.5	58.4	1.0	1.7
Brandenburg, including Berlin	30.4	36.4	2.8	1.7
Silesia	36.1	52.0	3.9	8.5
Hanover, Brunswick, Bremen, Oldenburg	25.7	54.2	2.8	3.1
Hamburg, district of lower Elbe, Schleswig-Holstein, Lubeck, Mecklenburg	13.0	35.2	.4	4.2
Pomerania	25.2	15.1	6.5	3.5
East Prussia	32.2	37.2	15.1	16.3
Sarre district	1.9	.4	----------	----------
Total	33.5	54.7	5.1	13.0
Building trades	10.7	11.0	2.6	2.9
Printing trades	46.3	49.4	1.2	1.7
Chemical industry	50.7	44.0	10.5	7.8
Woodworking	11.9	21.4	2.7	4.6
Metal industry	52.1	63.5	10.8	21.1
Shoe industry	20.7	14.5	.4	.3
Textile industry	78.2	82.4	2.5	4.3
Total	33.5	54.7	5.1	13.0

Taken as a whole, the results of the inquiry show that the assertion so often made, that everybody in Germany now works from 10 to 12 hours, is by no means true. In spite of their financial exhaustion and consequent weakened power of resistance, the German labor organizations have so far been able to prevent the general introduction of a 9 or 10 hour day. According to the preceding tables, about two-thirds of the establishments and nearly one-half of the workers covered by the inquiry are still operating on the basis of the 48-hour week, only 33.5 per cent of the establishments having availed themselves of the opportunity to extend the 48-hour week by overtime work.

MINIMUM WAGE

Report of Minimum Wage Board of Ontario

THE third annual report of the minimum wage board of the Province of Ontario covers the calendar year 1923. Thirty orders have been issued, 20 of which have been in force for at least a year. The experience under these orders shows "that the lowest wages have largely disappeared, that the highest wages have notably increased, and that the intermediate wage levels are graded in an orderly fashion between these two extremes. The whole wage scale has risen."

The number of orders issued does not indicate the number of trades or groups of occupations covered, as separate provision is made for Toronto, four cities next in size, cities of 5,000 to 30,000 population, and the rest of the Province. The rate for an experienced worker in Toronto is $12.50 per week based on a cost-of-living budget which was revised as of October 31, 1923. This budget showed the annual cost of board and lodging to be $364; clothing, $124.40; sundries, $162; making a total for the year of $650.40. This was a weekly cost of $7 for board and lodging, $2.39 for clothing, and $3.11 for sundries, or a total of $12.50.

The number of working women in the Province is reported as 129,372, the largest single group being office workers, of whom there are 40,000; saleswomen in retail stores follow closely with 39,942; the textiles trades employ 11,872, and the needle trades 10,727.

The issue of permits for aged or handicapped workers is permitted, also for young girls, or to meet trade emergencies. The power to issue such permits has been used but sparingly, only 46 such permits being in force at the time of the report. There appears to be a very satisfactory relationship between employers and the board, orders being formulated only after thorough discussion and cooperation.

The wide ranges in wages characteristic of unregulated employment of women are discussed, as in the preceding report. No attempt is made to explain these variations. "They conform to no economic law. They represent a condition which is everywhere present, and which contains a menace to the entire community." Adjustment under the law has been accompanied by some reports of failure to pay the required minimum rates. The commission has insisted not only on the adjustment of current wages, but also the payment of arrears due since the order became effective. "Sometimes this has been done with reluctance, but it has always been done." But 23 firms and 72 workers were involved in the period reported for, the total sum being $1,706.60.

The new orders, Nos. 21–30, cover drugs, chemicals, etc.; office workers; employees in hotels, restaurants, and refreshment rooms; boot and shoe factories; department stores; and electrical trades. The learning time is divided into two periods of six months each for females over 18, and three periods of six months each for those

under 18. In Toronto the entrance rate for those 18 or over is $10, advancing to $11 at the end of six months and $12.50 at the end of a year. Younger workers receive $8, $9, and $10 for each half year, respectively.

The standard wage in the four principal cities other than Toronto is $11.50 per week; in those 5,000 to 30,000 population, $11 per week; and in those 5,000 and under, $10.

English Legislation Concerning Agricultural Wages

IN 1917 the need for increased production in England led to the passage of the corn production act, which among other things provided machinery for fixing agricultural wages. In 1921 this act was repealed, and a system of local joint conciliation committees was established, each empowered to fix wages in its own district by agreement between the representatives of the farmers and the laborers. The committees might, if they wished, submit the rates agreed upon to the minister of agriculture for confirmation; and upon receiving this, the rates became statutory minima, obligatory upon all employers within the district.

There was no compulsion upon the local committees, however, to come to an agreement, and as times grew worse, they did not. During the first year, 1921, agreements were common, rates being agreed upon in 55 out of the 63 districts. But many of these agreements were for limited periods, and as they came up for renewal or revision, the two sides differed more and more widely as to the proper wages. Under these circumstances, the workers were at a disadvantage. If they accepted the employers' idea of what the wage should be, well and good; if not, there was no agreement, and the employers paid what they considered proper. In July, 1924, agreed rates were in force in only 12 districts, though in two others wages had been fixed by some other method than through the conciliation committees. In these areas wages varied from 25s.[1] for a week of 50 hours in Norfolk and Suffolk to 35s. in Lancashire, where the number of hours is not specified. There is little classified information as to wages in the districts where no agreement was reached. In some six areas of this kind, the National Farmers' Union recommended that its members pay rates varying from 27s. to 30s. a week, while in some of the other areas the minister of agriculture reported that cases have been found of wages ranging as low as 20s. a week.

From such information as is available, however, the Ministry of Agriculture estimate the average of the rates in England and Wales as a whole in 1923 to have been about 28s. a week, or 56 per cent above the average of the rates prevailing in 1914. As wages have been almost stationary since early in 1923, this figure is probably about correct for the present date.[2]

The index figure of the cost of living in England in July, 1924, was 171. In June and July, 1923, and in June, 1924, it stood at 169, but with these exceptions it has not, since the beginning of 1922, fallen below the present figure, while it has ranged upward to 192. The real wages of farm laborers, therefore, have been decidedly lower

[1] Shilling at par=24.3 cents; exchange rate varies.
[2] The Economist (London), Aug. 16, 1924.

than before the war, and it is generally admitted that there has been and is much suffering among these workers. Also, numbers of them are leaving the farms, going into the cities or emigrating in search of better-paid work, so that a genuine scarcity of skilled farm workers is developing. The agitation for some betterment in their position led to the introduction this year of a bill designed to establish effective machinery for wage fixing, in the interest both of the farm worker and of the farmer who feels that wages are too low, but who can not afford to raise them unless his competitors do the same.

The bill was introduced in April, and after a stormy passage through the two houses received the royal assent on August 7, thus becoming law. The two points most strongly debated were whether the bill should include a legal minimum below which no district might go, and whether the local committees should have full power, or be subordinate to a central board. The first point was decided in the negative; on the second a compromise was reached. The text of the bill, as finally passed, is thus summarized by the Ministry of Labor Gazette in its issue for August, 1924:

> The act requires the minister of agriculture and fisheries to establish an agricultural wages committee for each county (or for a group of combined counties) in England and Wales, and an Agricultural Wages Board for England and Wales. The agricultural wages committees are required to fix minimum rates of wages for workers employed in agriculture, for timework, and may also fix minimum rates for piecework. No general minimum rate is fixed by the act itself, but it is provided that a committee shall, so far as practicable, secure for able-bodied men such wages as are adequate to promote efficiency, and to enable a man to maintain himself and his family in accordance with a reasonable standard of comfort.
>
> If an agricultural wages committee do not within two months of being established fix a minimum rate of wages; or if they fail to fix a minimum rate in substitution for a rate which, by cancellation or otherwise, has ceased to operate; or if the representative members of the committee, by resolution, request the agricultural wages board to fix, cancel, or vary a rate, the agricultural wages board may fix, cancel, or vary a rate, as the case may be, themselves.
>
> The minister of agriculture and fisheries may direct an agricultural wages committee to reconsider any minimum rate which has been fixed by them.

WOMEN IN INDUSTRY

Wages and Hours of Women in New Jersey Industries

THE Federal Women's Bureau has recently published the results of a study[1] of hours and earnings of women industrially employed in New Jersey, which was undertaken in 1922 at the request of the New Jersey Department of Labor, and occupied the last four months of the year. It covered 300 stores, laundries, and manufacturing establishments located in 43 towns and cities, and employing 34,894 women, of whom 239 were employed in night work.

The great majority of the women studied—91.2 per cent—were employed in some form of manufacturing, 6.7 per cent were in retail stores, and 2.1 per cent in laundries. Nearly one-third of those engaged in manufacturing industries were in textile mills, the largest groups being found in the manufacture of silk and woolens.

The New Jersey law permits a 10-hour day and a 54-hour week for women, but quite generally the actual hours were shorter than these. A day of between 8 and 9 hours was common, 41.2 per cent of the women falling in this group, while 13.3 per cent had an 8-hour day, and 5.8 per cent a day of less than 8 hours. "Of all the plants visited, only 19, employing 5.4 per cent of the women included in the survey, had a scheduled day as long as 10 hours; that is, only 19 employers out of the 300 visited took advantage of the full limits of the law."

In the manufacture of rubber and rubber products, 56.7 per cent of the women employed had a 10-hour day, in the manufacture of electric products other than lamps 37 per cent, and in the manufacture of cigars 32.8 per cent had such a day, but in no other industry did so many as one-sixth of the women work 10 hours. In the general mercantile establishments 89.1 per cent of the women had a scheduled day of less than 8 hours, and none had as long a day as 9 hours, while in the silk mills and the 5-and-10-cent stores 48.2 per cent of the women had an 8-hour day.

On the whole, New Jersey shows an unusually good record so far as the daily hours of her women in industry are concerned. The existence of a low legal standard, however, has made it possible for some employers to stick to the long working-day. While only 18.2 per cent of the women surveyed had a working-day of over 9 hours, yet that proportion amounted to over 6,000 women in the group for which information was available.

For weekly hours, the situation was somewhat less favorable. Just 12 per cent of the women worked a week of 44 hours or less, 18.6 per cent worked over 44 but under 48 hours, 24.6 per cent exactly 48 hours, 14.9 per cent over 48 and under 50 hours, 11.3 per cent 50 hours, 10.2 per cent over 50 and under 54 hours, and 8.3 per cent worked 54 hours or over. The long week was most common in the manufacture of rubber and rubber products, where 75.1 per cent of the women were scheduled for a week of 54 hours or more, and in laundries, where 48.3 per cent had such a week. A reduction of hours on Saturday was common.

[1] United States Women's Bureau. Bulletin No. 37. Women in New Jersey industries. A study of wages and hours. Washington, 1924. v. 99 pp.

In the manufacturing industries 67.4 per cent of the women had a day of less than 5 hours, while less than 6 per cent were scheduled to work as long as 6 hours on Saturday. None of the women in stores had a short day on Saturday.

The earnings differed widely, being affected both by the industry and the method of computing. In some industries, piece rates prevailed; in others, time rates. The median earnings were used to indicate the general situation.

The median of the week's earnings for 34,655 day workers was $14.95. Highest earnings were for 361 women in the manufacture of felt hats, whose median was $23. Lowest earnings were for 252 women in candy manufacturing, whose median was $10.35. In the textile industry, silk goods manufacturing had median earnings of $15.90 for 3,543 women; in woolen goods manufacturing median earnings for 2,326 women were $14.75.

A comparison between actual earnings and rates of wages was made for 6,746 women, which showed little difference between the two. "The median of the rates was $14.55, and that of the earnings $14.35." A comparison of rates and scheduled weekly hours showed that the higher wage rates were likely to accompany shorter weekly hours, "those firms with a high standard in one respect having it also in the other." The relation between earnings and experience in the industry was somewhat complex.

A study of the wage figures by industry reveals the fact that although in each industry there is a certain premium put upon experience, there is no very constant relation between the two factors. In only three industries was the highest median reached by less than 5 years of experience. In the manufacture of rubber and rubber products the highest median, an increase of 32.6 per cent over the lowest, was paid to those with 1 but less than 2 years of experience. In optical goods and scientific instruments manufacturing the highest median was for those with 2 and under 3 years of experience, and in the manufacture of chemicals and drugs the highest median was for those with 4 and under 5 years of experience. In six industries—the manufacture of electric lamps, other electrical products, metal products, pencils, hosiery and knit goods, and miscellaneous manufacturing—5 and under 10 years of experience was the period which brought the highest median earnings. In the manufacture of underwear, food products, and woolen goods 10 to 15 years were required to reach the highest median, while in the remaining seven industries it was the group with the greatest experience (15 years or more) which received the highest earnings.

The women studied were on the whole a youthful group. Of 13,274 from whom age data were secured, 32.2 per cent were under 20 years old, 39.8 per cent were between 20 and 30, and 28 per cent were over 30. Of 13,861 reporting nativity, 70.5 per cent were native-born white, 2 per cent native-born negro, and 27.5 per cent foreign born. The largest group of the foreign born, 28.7 per cent, came from Italy.

Summing up the general situation, it is pointed out that New Jersey conditions are better than the New Jersey law demands, and better than are found in some other States investigated, but that there is room for improvement.

Nevertheless, conditions in New Jersey compare favorably with the situation found elsewhere. Of 11 States in which the Women's Bureau has conducted investigations of women's hours, New Jersey ranks second in the per cent of its women who were scheduled to work 48 hours or less. In Maryland 56.9 per cent, in New Jersey 55.2 per cent, and in Rhode Island 53.5 per cent of the women were scheduled for a 48-hour week or less. In the matter of wages New Jersey also ranks high. Of the 10 States in which the Women's Bureau has conducted wage investigations, New Jersey's median earnings of $14.95 are second only to those of Rhode Island, whose median of $16.85 was based on records secured in 1920, when wage rates all over the country were exceptionally high. How-

ver, the fact that conditions are so generally commendable does not mean that here is no room for improvement. There were 6,419 (18.5 per cent) who were cheduled to work more than 50 hours a week. There were 8,837 (25.5 per cent) who earned less than $12 a week. It is to these women at the lower end of the cale that attention must be directed, so that persons interested in the well-eing of all the women in the State may see the outline of the problem which is efore them.

Legislation for Women in Oregon[1]

A STUDY of legislation for women in Oregon which has recently been issued gives not only a résumé of such legislation, but a study of the conditions out of which it sprang. Oregon was ate in passing laws designed to protect women in industry; the first aw limiting their hours of labor was adopted in 1903, and it was not ill 1913 that comprehensive measures for regulating the conditions nder which they might be employed were passed. This slowness was lue to the fact that Oregon was mainly a lumbering and agricultural State, that manufacturing industries were a late development, and hat in the earlier years the women employed in industry were so few nd so scattered that no need was felt for securing them against xploitation. As late as 1900, according to the Federal census of hat year, there were only 6,026 women in the whole State employed n trade and transportation and manufacturing and mechanical indus-ries, and the women themselves were as little concerned over their ncreasing employment in these lines as anyone else.

In Oregon, where lumbering and agriculture were still the chief occupations of arge numbers of persons, the agitation on prohibition of intoxicating liquors and n equal suffrage engrossed women. The fact that industrial problems were de-eloping in the State might not have been called to the attention of the popula-ion at large for 10 years later than they were had not the State Federation of Labor been organized in 1902.

At the first annual convention of the federation, held in Portland, n May, 1902, there was no demand for laws concerning women exclu-ively, but the convention went on record as favoring legislation to heck the growth of child labor, to establish the office of commis-ioner of labor statistics, and to secure the universal eight-hour day. The following year, seven labor bills were introduced in the legisla-ure, including one to regulate the hours of employment of women in ertain industries. The title called for a limitation of the hours of women employed in "any mechanical or mercantile establishment, aundry, hotel, or restaurant," but, as passed, the act dealt only with those employed in mechanical establishments, factories, and aundries, and for these it fixed 10 hours as the maximum working-day. Violation of the act was made a misdemeanor, punishable by a fine of not less than $10 nor more than $25. It is pointed out that his law, although a step forward, nevertheless permitted employ-ment for 70 hours a week. "For though Oregon had a Sunday clos-ng law, this could be complied with outwardly, and in a real or fan-ied emergency women might be employed most of Sunday behind losed doors."

The change in the scope of the law was a concession to the retail tores which, under the form adopted, were not limited as to the

[1] Sister Miriam Theresa: Legislation for Women in Oregon, Washington, Catholic University of America, 1924. 153 pp.

number of hours during which they might employ women. In 1907 the law was extended to cover stores, but an exception was made permitting them to employ women for not more than 12 hours in any one day for the week preceding Christmas.

In 1907, too, the penalty for violation of the law was raised to a minimum of $25 and a maximum of $100. It was further amended in 1909 to include telegraph or telephone establishments, or office, or any express or transportation company, and a limit of 60 hours in any one week was set.

By 1912 public sentiment was waking up to the desirability of preventing the development of bad industrial conditions, and the consumers' league made an investigation into the cost of living and the wage rates of women, the results of which were used to show the need of further protective legislation. The survey covered wage statistics of about 5,000 women employed in other than domestic occupations, and included careful studies of hours and working conditions affecting women employees. Its findings, when published, attracted much attention, and the bill introduced in 1913, authorizing the establishment of an industrial welfare commission, and providing for fixing minimum wages and maximum hours and standard conditions of labor for women and minors passed the house with only three adverse votes and the senate unanimously. Under its terms, Oregon has a commission of three persons, representing, respectively, the employers, the employees, and the public, who are to ascertain and declare standards of hours and conditions for women and minors in any occupation within the State of Oregon. The commission is likewise empowered to declare, after a carefully prescribed procedure of investigation and public hearings, minimum wages for women and minors. The minimum wage may differ according to locality when investigation shows a difference in the cost of living, and special licenses may be issued to women "physically defective or crippled by age or otherwise, authorizing their employment at a wage less than the minimum time rate."

The constitutionality of the minimum wage legislation was at once attacked, and the case was carried to the United States Supreme Court, where it came up for final adjudication in 1917. By that time Louis D. Brandeis, who had prepared a brief upholding the constitutionality of the law, had become a justice of the Supreme Court, and on account of his former connection with the case refrained from joining in the decision. The other eight justices divided evenly for and against the law, which the State therefore continued to enforce, although a real decision as to its constitutionality has never been reached.

The writer devotes comparatively little space to the direct effects of the law, as this subject had been covered by a Federal investigation in 1914, and again in 1919, but discusses at some length the indirect effects. First among these she places its efficacy as a means of industrial conciliation. Both in the commission itself and in the conferences which are appointed to conduct the investigations on which minimum-wage determinations are based, employers and employees are brought together, get something of each other's viewpoint, and find that conflict is not the only means of adjusting their differences. As an evidence of this effect the writer quotes a bulletin issued by the Manufacturers' and Merchants' Association of Oregon to its members after the decision of the Supreme Court declaring

the minimum wage law of the District of Columbia unconstitutional, when the status of all minimum wage laws was doubtful. In this the association strongly upholds the law:

Whereas, the experience of a great majority (if not all) employers of Oregon who employ women, is that the minimum wage law of this State has been of such material benefit to both employers and employees (aside from the humanitarian side of the question), that it would be most unfortunate as well as a disgrace to the State to disturb the equitable and harmonious relations now existing where women are employed in our industries: Therefore be it

Resolved, That the Manufacturers' and Merchants' Association of Oregon pledge to the industrial welfare commission their support and cooperation in maintaining the present status of the Oregon law, and that we will use every effort to discourage anyone from testing the validity of the law in the courts, and will also use every effort to prevent the repeal of the law by the legislature, should such a thing be attempted, and as an evidence of our sincerity we hereby pledge ourselves to be governed in the future as we have in the past by the rulings of the industrial welfare commission.

A second important effect is said to be the training of the unorganized woman worker to a sense of her place in the community, and a third has been the fostering, in the public at large, of a sense of its responsibility in regard to the conditions under which women and children are employed. "The operation of the statute arouses in the public a realization that the ultimate success of the legislation rests with people at large." It is along these indirect lines that the writer expects the legislation to accomplish its most far-reaching effects.

Women in Industry in Washington [1]

IN THE 10 months ending April 30, 1924, the supervisor of women in industry of the Department of Labor and Industries of Washington copied the pay rolls of 227 representative firms of that State employing 5,040 females. The average weekly wage for working women, exclusive of apprentices and minors, was found to be as follows:

Heads of departments and buyers	$46.36
Office employees	21.83
All other employees (excluding minors and apprentices)	16.89

The average wage of the 5,040 female workers, taken as a whole, was $18.06. The salaries of heads of departments and buyers showed a considerable decrease as compared with the previous year. The wages paid office workers and operators, however, showed practically no change.

Of 3,130 women in industry in the State, the numbers in the different age groups are as follows:

NUMBER OF WOMEN IN INDUSTRY IN WASHINGTON, JULY 1, 1923, TO APRIL 30, 1924, BY AGE GROUPS

Age group	Number	Age group	Number
18 to 20 years	751	41 to 45 years	200
21 to 25 years	759	46 to 50 years	147
26 to 30 years	477	51 to 55 years	74
31 to 35 years	321	56 to 60 years	37
36 to 40 years	353	61 to 66 years	11

[1] Washington. Department of Labor and Industries. Second annual report, June 1, 1922, to December 31, 1923. Olympia, 1924, pp. 119, 120.

Referring to the comment that has been made in the State on labor turnover as the result of minimum wage legislation, the supervisor of women in industry makes the following report on length of service of women in four classes of industry:

NUMBER OF WOMEN IN LAUNDRIES, MANUFACTURING PLANTS, AND MERCANTILE INDUSTRIES, AND OF TELEPHONE AND TELEGRAPH EMPLOYEES, EMPLOYED EACH SPECIFIED NUMBER OF YEARS, APRIL, 1924

Number of years employed	Number of women employed by—			
	Laundries	Manufacturing plants	Mercantile industries	Telephone and telegraph company
1 to 5 years	192	129	620	[1] 1,802
6 to 10 years	37	53	141	370
11 to 15 years	13	2	39	136
15 to 20 years	3		19	46
21 to 25 years	1	2	2	6
26 to 30 years	1			1

[1] 348 employed less than 1 year.

LABOR AGREEMENTS AND AWARDS AND DECISIONS

AGREEMENTS

Plasterers and Cement Finishers—Baltimore, Md.

LOCAL 155 of the Operative Plasterers and Cement Finishers' International Association included in its agreement with the Employing Plasterers' Association of Baltimore provisions designed to insure good work, the safety of workers, and the carrying on of winter building. The agreement is effective from May 1, 1924, to May 1, 1925. The provisions mentioned are as follows:

Quality of work

SECTION 8. All work must be done in a thorough, workmanlike manner, and all journeymen under the instruction of the foreman must complete their work in such a manner or make it right in their own time. Should any foreman refuse to divulge the name or names of any journeyman who has left his work in an unworkmanlike manner, on request of the steward, business agent, or any member of local No. 155, he (the foreman) shall be fined the sum of not less than $10 nor more than $50, or barred from acting in the capacity of foreman from one to five years, or both. Foreman to be tried by joint board of Employing Plasterers' Association and local No. 155. Should it be proven at any time that the foreman was or is responsible for any bad work done at any time or place, directly or indirectly, he shall be dealt with as prescribed in this section.

Safety

SEC. 14. All shafts and dangerous places must be sheeted tight above and below to insure safety of men employed in such places. When men are requested to work on top or inside of a car in any elevator or on a platform used in an elevator shaft, car or platform must be inspected by a recognized inspector of the city, and a certificate of inspection issued to the plastering contractor, or whoever may be employing the plasterer, before the plasterer will be allowed to work in such a place. Dangerous places to be determined by the business agent, and he to be notified before any plasterer is asked to or works in such a place.

Winter building

SEC. 15. On and after November 1 to April 15 all buildings shall be inclosed in a suitable manner to exclude weather conditions. From November 15 to March 15 all buildings shall be heated to a temperature of not less than 40° before the plasterer shall be allowed to work in same.

The agreement provides for an increase in rates of pay and for a small extra compensation for foremen, as follows:

It has been agreed that the wages shall be $14 per day for plasterers, $12 per day for casters and model makers, for an eight-hour day, same effective May 1, 1924, until May 1, 1925, and $14 for modelers. * * *

Each foreman shall receive 50 cents or more per day than the regular rate of wages.

Sheepskin and Leather Coat Workers—Newark, N. J.

THE Sheepskin Leather Coat and Overall Workers' Union, local No. 178, of the Amalgamated Clothing Workers of America, made an agreement with a firm manufacturing sheepskin and leather coats in Newark, N. J., the agreement to be in effect from May 9, 1924, to July 31, 1926. The employers agreed to employ only members of the union, observe proper sanitary conditions, pay wages in cash, permit the business agent to visit the factory during working

hours, and to declare no lockout. The union agreed to furnish such help as might be required, and in case it could not supply same to give permits to help taken on by the employers and to declare no strike. The wages were to be $55 for markers and $40 for machine cutters for a 44-hour week, with overtime at the rate of time and a half, and with equal distribution of work in the slack season. Other provisions were as follows:

6. All difficulties arising shall be adjusted by the [firm] and the shop chairman. If they fail to settle said difficulties, same shall be submitted to the representative of the local union for adjustment. Should this not prove satisfactory, the subject in dispute shall be submitted to a general officer of the Amalgamated Clothing Workers of America for adjustment. Should this not prove satisfactory, the said subject shall be submitted to a board of arbitration of three members, one to be chosen by the union, one by the firm, and a third chosen by both parties. A decision rendered by this board shall be final and binding on both sides.

9. Not more than one hour overtime shall be permitted on any week day, but under no circumstances shall overtime be worked on Saturday or Sunday afternoons, without the express permission of the union.

11. The party of the first part agrees not to send work to contractors without the express permission of the union, and no work may be sent to contractor when the workers in the inside shop are not fully employed. The party of the first part also agrees not to send work to a contractor unless such contractor employs good standing members of the parties of the second part and shall pay the agreed schedule of prices.

13. There shall be a reserve of two machines and accessories to each eight operators employed in order to prevent loss of time to the operators in the event of any operator's machine becoming out of order.

14. The party of the first part agrees to give to the parties of the second part 60 days' notice of any change of location of its office or manufacturing plant, and 60 days' notice of the opening of any new manufacturing plant.

15. Because of the difficulty of determining damage which may result from any breach of this agreement on the part of the party of the first part, the party of the first part hereby agrees within two days of the signing of this agreement to make and deliver a note for $2,000, payable to secretary-treasurer of local No. 178, and payable on demand but not later than the expiration of one year from the date of making; and the party of the first part further agrees to make a similar note one month before maturity of the note above mentioned, payable on demand but not later than the expiration of this agreement; and it is agreed by the parties of the first part that the members of the firm will indorse these notes and will secure the indorsement of the same by one other business man of a standing satisfactory to the representatives of the parties of the second part; and it is further agreed that in the event of any breach of any term of this agreement by the party of the first part, the parties of the second part may enforce either of these notes and collect the amount due thereon as liquidated damages for the said breach.

These notes shall also be security and guaranty for the faithful performance by the party of the first part of each and all the terms and promises made by said party and for the payment of wages by the party of the first part to its employees.

Street-Railway Employees—Pen Argyl, Pa.

AN AGREEMENT between the Bangor-Nazareth Transit Co. and Division No. 169 of the Amalgamated Association of Street and Electric Railway Employees of America, made August 1, 1924, contains several clauses relative to seniority and discipline.

SECTION 3. The company shall refuse to keep in its employ after, not to exceed 30 days' trial, any motorman or conductor who may prove unsatisfactory to either party hereto, and in case of expulsion of any of its members by said association the company agrees to dismiss from its services such members upon satisfactory proof of the misconduct alleged or of conduct contrary to the spirit or the condition of this agreement.

SEC. 5. That any member of the association [who] by act or word interferes with or disturbs the cause of the association or company upon any subject whatsoever, or interferes with or disturbs the service in any manner contrary to the spirit and conditions of this agreement, he shall, upon proof of same, be dismissed from the service. In case either party hereto desires reasons for said discharge or suspensions, the same shall be furnished in writing within seven days from such time as request is made.

SEC. 7. All runs shall be thrown open for selections at least five days before the 1st day of March and the 1st day of September to permit the seniority rights of the men to take effect upon the first day of each semiannual term except in case of an opening, then the move up to take effect the first day of the following month and in case of a change of schedule the list shall be opened for selection to take effect with the change.

SEC. 9. Any member desiring a protracted leave of absence shall make application for same in writing to the manager or his representative and the executive board of the association, specifying for what purpose said leave of absence is desired; and if permit is granted, it shall be in writing and signed by the manager or his authorized representative and by the committee of Bangor and Nazareth Division of the association; a leave of absence of over 30 days is to be considered a protracted time.

SEC. 17. Any employee on the seniority list who is working in any other department for the company will hold his place of seniority on the list and will have the privilege every six months, when the board is open for assignment, to take his place on the list and work whatever run or extra work that he may be entitled to, according to his seniority. He can not take his place on the seniority list for work on the cars excepting March 1 and September 1, unless all those on the seniority list below him consent and the management approves.

The seniority of motorman and conductor starts when they become first extra. Promotion to regular runs shall be made from first extra, according to seniority. Any first extra motorman or conductor refusing to accept promotion to a regular run shall be demoted to the bottom of the extra list.

The wages of motormen and conductors employed on two-men cars are as follows: First six months of service, 45 cents per hour; second six months, 48 cents; after one year, 50 cents. Operators on one-man cars receive 10 cents per hour additional.

Upholsterers—New York City

LOCAL No. 70 of Carpet Upholsterers and Linoleum Layers' Union and Local No. 71 of the Carpet Sewers' Union made agreements June 1, 1924, with employing firms in New York City. Each agreement provided for a 44-hour week, with double time for overtime, Sundays, and holidays. All employees are to be members of the union, and one apprentice is to be permitted for every four journeymen.

Local No. 70 claims jurisdiction over all work of measuring, cutting, fitting, laying, and taking up all floor coverings, drilling of holes for sockets and pins, and the fitting of all devices for the attachment of floor coverings.

Measurers, cutters, layers, and head pressers on floor coverings receive $57.75 per week. The term of apprenticeship is three years.

Local No. 71, Carpet Sewers' Union, claims jurisdiction over all carpet sewers, rug hands, and operators engaged in sewing floor coverings, also the mending of rugs (where female labor is employed). Their wages are: Carpet sewers, $31.50 per week for hand sewers; table-machine operators, $32.55 per week; and standing-machine operators, $33.60 per week. "Standing-machine operators" means workers at standing machines. Forewomen shall receive a minimum rate of $36.75 per week. The term of apprenticeship is two years.

AWARDS AND DECISIONS

Decisions of Railroad Labor Board

American Railway Express Co.—Rules

AS A RESULT of a dispute as to what should constitute just and reasonable rules governing working conditions of employees of the American Railway Express Co., the Railroad Labor Board, in Decision No. 2590, July 22, 1924, caused certain rules to be incorporated in the agreement between the carrier and its employees represented by the Brotherhood of Railway and Steamship Clerks, Freight Handlers, Express and Station Employees; the Order of Railway Expressmen; and Railway Express Drivers, Chauffeurs and Conductors, local No. 720, to be effective August 1, 1924. Only such rules were referred to the board as the carrier and employees were unable to agree upon themselves in their effort at revision. For a complete history of the dispute, reference may be made to Decisions Nos. 3, 217, 722, and 1956. (See MONTHLY LABOR REVIEW, September, 1920, p. 101, September, 1921, p. 135, April, 1922, pp. 117–121, and November, 1923, p. 123.)

The rules as changed provide for time and one-half after 8 hours' service (instead of 9 as before) and on Sundays and holidays. The revised rules are as follows:

Intermittent service

RULE 46.—At agencies where not in excess of five employees are regularly employed, where service is intermittent, 8 hours' actual time on duty within a spread of 12 hours shall constitute a day's work. Employees filling such positions shall be paid overtime for all time actually on duty or held for duty in excess of 8 hours from the time required to report for duty to the time of release within 12 consecutive hours, and also for all time in excess of 12 consecutive hours computed continuously from the time first required to report until final release. Time shall be counted as continuous service in all cases where the interval of release from duty does not exceed one hour.

Exceptions to the foregoing paragraph shall be made for individual positions when agreed to between the management and duly accredited representatives of the employees. For such excepted positions the foregoing paragraph shall not apply.

This rule shall not be construed as authorizing the working of split tricks where continuous service is required.

Intermittent service is understood to mean service of a character where during the hours of assignment there is no work to be performed for period of more than one hour's duration and service of the employees can not otherwise be utilized.

Employees covered by this rule will be paid for not less than 8 hours within a spread of 12 consecutive hours. [The old rule omitted the number of employees.]

Overtime

RULE 54.—Except as otherwise provided in these rules, time in excess of 8 hours, exclusive of meal period, on any day, will be considered overtime and paid on the actual minute basis at the rate of time and one-half.

Notified or called

RULE 55.—Except as provided in rule 56, employees notified or called to perform work not continuous with, before, or after the regular work period, or on Sundays (or the day given in lieu thereof) and specified holidays, shall be allowed a minimum of 3 hours for 2 hours' work or less, and if held on duty in excess of 2 hours, time and one-half will be allowed on the minute basis.

Full-day period

RULE 61.—Work performed on Sundays and the following legal holidays—namely, New Year's Day, Washington's Birthday, Decoration Day, Fourth of July, Labor Day, Thanksgiving Day, and Christmas (provided when any of the above holidays fall on Sunday, the day observed by the State or Nation, or by proclamation, shall be considered the holiday) shall be paid at the rate of time and one-half, except that employees necessary to the continuous operation of the carrier and who are regularly assigned to such service will be assigned one regular day off duty in seven, Sunday if possible, and if required to work on such regularly assigned seventh day off duty, will be paid at the rate of time and one-half time; when such assigned day off duty is not Sunday, work on Sunday will be paid for at straight-time rate. [The exception is new.]

RULE 62. Eliminated.

Determining daily rate

RULE 63.—To determine the daily rate for monthly-rated employees other than those in train service, divide the monthly rate by the number of working days contained in the month. The pro rata overtime rate for such employees shall be determined by multiplying the monthly rate by 12 to obtain the annual rate and dividing the annual rate by 2,448, the number of working hours in the year exclusive of Sundays and holidays. [The old rule provided for a dividend of 2,504 instead of 2,448. "And holidays" is new.]

Month's assignment

RULE 65.—For all employees in train service, except those in combination service as defined in rule 69, 240 hours, or less, on runs in regular assignment shall constitute a basic month's work. Deadhead hours, properly authorized, will be counted as service hours. Time for trip of employees on a car scheduled to leave prior to 12 o'clock midnight on the last day of a month will be credited to the month in which the train handling the car is scheduled to arrive.

Overtime rate

RULE 66.—Train service employees included in rule 65 shall be paid overtime on the actual minute basis for all time on duty each month in excess of 240 hours at time and one-half times the hourly rate, which shall be determined by dividing the monthly wage by 240. Time shall be counted as continuous for each trip from the time required to report for duty until released from duty. Overtime shall be paid for at the end of each month. [The old rule provided for time and one-half after 270 hours' service.]

Relief period

RULE 70.—Not less than 96 hours off duty each calendar month, in 24-consecutive-hour periods, or multiples thereof, will be allowed at designated home terminal for employees whose assignment and service do not permit of at least a 12-consecutive-hours-off-duty period at their designated home terminal each 48 hours. Employees required to make one or more trips, either straight-away or turn-around, each day will be allowed not less than one day of rest in seven. Employees required to work on assigned lay over or rest days will be paid extra therefor as provided in rule 74. ["Consecutive hours" is new, as is also the next to the last sentence.]

Overtime for fractional parts of month

RULE 72.—For regular employees in train service working less than a full month in regular assignment, overtime will accrue after a ratable proportion of the 240-hour period has been worked. Such ratable proportion shall be determined in the ratio that the scheduled hours worked during the month bear to the scheduled hours constituting that month's work. By this method overtime for such employees will consist of the time actually on duty in excess of the ratable proportion of the 240-hour period as above determined.

NOTE.—"Scheduled hours," as mentioned above, consist of the scheduled train time plus the scheduled terminal time at initial and final terminals for each run.

Relief, substitute, and extra train employees

RULE 73.—(*a*) Where relief, substitute, and extra train employees are employed at a fixed monthly salary to work as directed, they shall be paid their regular monthly pay and overtime for all time worked in excess of 240 hours per month at time and one-half rates. The pro rata hourly rate shall be determined by dividing the monthly rate by 240, providing that the principle established in rule 80 is maintained.

(*b*) Where such employees are paid no fixed salary per month but are paid according to time worked at the pay of the run, they should be paid on the basis provided for regularly employed train employees in rule 72. In the case of such employees, the 240 hours per month applicable to employees in regular assignment do not apply, since under the method provided in rule 72 they will receive overtime for time run in excess of a ratable proportion of 240 hours, as is the case of regularly employed messengers.

(*c*) With regard to employees paid no stated salary but who perform extra work not in place of any regular messenger, they shall be paid as follows:

If substituting or running extra on a run where there is a regular assignment, they shall be paid as per paragraph (*b*) of this rule; i. e., the regular pay of the run, including the ratable proportion of overtime.

If employed in train service where there is no regular assignment, they shall be paid 60 cents per hour (50 cents per hour for helpers), with a minimum guaranty of 8 hours.

The 240-hour provision applicable to employees in regular assignment does not apply to employees covered by this paragraph.

Regular train employees working during lay-over period

RULE 74.—(*a*) When necessary to double or run out of time, such employees shall receive credit for time so spent, which time will apply against the monthly hours of 240, overtime to be paid for time run in excess thereof, provided that where the assigned working hours of the run are less than 240 hours per month, such service shall constitute a call and be paid therefor as per paragraph (*b*) of this rule.

(*b*) Employees called to protect a route other than their own will be paid as follows: Time shall be computed from the time reporting for duty until the time released from duty for each trip, time to be counted as continuous when the period of relief does not exceed one hour. Deadhead hours duly authorized to be counted as service hours. Compensation for time so occupied will be paid on the following basis:

For the first 8 hours pro rata, time therafter at time and one-half time applied to each trip.

(There will be a minimum allowance of 2 hours at time and one-half time for 2 hours worked or less. If time exceeds 2 hours but is less than 8 hours, the bonus of 1 hour will continue up to and including the seventh hour.)

(*c*) In the determination of the hourly rate the monthly rate (own rate, if higher; otherwise, rate of run occupied) should be divided by the scheduled hours constituting a month's work. Time, specially compensated for under this provision, would not be included in the monthly time of such men applying on their regular assignment. In case such special duty causes absence on regular assignment, the pay of regular assignment will be apportioned as per rules 71 and 72.

[The second and third paragraphs under (*b*) are new.]

Short turn-around service

RULE 76.—Train employees on short turn-around runs shall be paid overtime for all time actually on duty each month in excess of 240 hours, as provided in rule 66. Time to be counted as service time in all cases where the interval of release from duty at any point does not exceed 1 hour: *Provided*, That the minimum service-time allowance shall be computed at not less than 8 hours within any 1 day.

Miscellaneous

Request of the employees (Docket 4043) for change in rule 47 is denied.

Interpretation of this decision

Should a dispute arise between the carrier and employees as to the meaning or intent of this decision which can not be decided in conference between the parties directly interested, such dispute shall be handled in accordance with the transportation act, 1920.

Clerical Employees—Accepting Employment while on Leave of Absence

"LEAVE of absence" was a question before the Railroad Labor Board which resulted in Decision No. 2616, July 30, 1924. Rule 48 of the agreement between the Brotherhood of Railway and Steamship Clerks, Freight Handlers, Express and Station Employees and the Great Northern Railway Co. reads as follows: "Employees accepting other employment while on leave of absence without first obtaining permission from the officer in charge, approved by the division chairman, shall be considered out of service."

July 17, 1922, following the shopmen's strike, the locomotive wipers, cinder-pit men, and similar classes of employees on the Great Northern Railway left their posts. Some 200 clerks in the general and other offices volunteered to perform the work of the strikers until they returned or the forces were recruited. As fast as possible the clerks were returned to their regular positions. The question arose whether these employees had not lost their seniority rights under the agreement because of their failure to obtain permission from the the officer in charge to perform this other work and whether "other employment," accepted during the leave of absence, meant employment other than in the regular position held by the employee, even though in the service of the same carrier. The carrier contended that the rule had not been violated, because it was made to prevent clerks obtaining a leave of absence to enter the service of some outside concern and continue to hold seniority rights over employees who remained in the service. The board, however, did not rule as to the question whether the action of the clerks was accepting "other employment," but based its decision on other grounds:

Decision.—The Railroad Labor Board decides that these employees were not on a leave of absence within the meaning of rule 48 of the agreement and therefore the provisions of the rule have not been violated. The board further decides in view of the fact that these employees voluntarily performed the service of the striking shopmen, that they shall not lose their seniority rights.

Dining Car Stewards—Representation

THE national president of the Brotherhood of Dining Car Conductors stated that that organization was the authorized representative of the dining-car stewards employed by the Chicago, Burlington & Quincy Railroad, and that it held signed authority from 85 per cent of these employees to represent them, but was unable to secure a conference with the management of the carrier for the purpose of negotiating an agreement on the question of hours of service and conditions of employment for these employees. The representative of the carrier claimed that the dispute was not properly before the board since the carrier had ignored the letter of the brotherhood relative to the matter. The board rendered its decision (No. 2591) July 22, 1924, as follows:

The Railroad Labor Board decides that an election shall be held and a secret ballot taken, under and in pursuance to Decisions Nos. 218 and 220 and addenda thereto of the board, for the purpose of determining the question of representation of the employees involved in this dispute; that upon such representation being determined by said secret ballot, the carrier shall proceed to meet representatives of those showing the majority in said election as the duly selected representatives of the employees involved in this dispute, and that said election shall be held on or before August 10, 1924.

Railroad Shops—Reduction in Force *v.* Shutdown

A CASE involving the distinction between the expressions "reduction in force" and a "shutdown" was decided by the Railroad Labor Board July 18, 1924, Decision No. 2583. The New York Central Railroad maintains four separate shops at Ashtabula, Ohio, all supervised by one foreman and under the jurisdiction of one general foreman, covered by one seniority zone, the employees having the right to displace other employees with less seniority regardless of the shop at which they may be working. January 10, 1921, notice was given that one of the shops, known as the Carson shop, would be closed the next day at 6 a. m.

Rule 9 of the agreement between the carrier and the American Federation of Railroad Workers reads as follows:

> When men are laid off on account of reduction in force, they will be laid off and reinstated in the order of their seniority and at their former rate unless there has been a decrease, or increase, in which case they will be put back at the prevailing rate. Before any reductions are made the hours shall be reduced to 40 hours per week. This does not apply to running repair points unless the service permits. Five days' notice will be given before reduction is made and lists will be furnished local committee. Lists will also be furnished committee when men are to be reinstated.
>
> When reducing forces, if men are needed at any other point, they will be given preference of transfer to nearest point, with privilege of returning to home station when force is increased, such transfer to be made without expense to the company. Seniority to govern in all cases.

The Federation contended that rule 9 applied in this case, saying:

> In this instance there is no distinction between the closing of the Carson shop and the reduction of forces at Ashtabula, as they are at one point, and the result is the same, regardless of the manner in which it is brought about.
>
> The committee contends further that the carrier should reimburse the employees in question to the extent of what they would have earned had they been allowed to work the five days, as provided in their agreement, less the amount paid to those who worked on January 10 and 11 preparing the shop for the shutdown.

The carrier said:

> As this was not in the nature of a reduction in force, but a complete shutdown of all service at that point, it was considered that we were justified in laying off the men at once.

The decision of the board was as follows:

> *Decision.*—The Railroad Labor Board decides upon the basis of the rule in effect and the circumstances as cited, five days' notice should have been given before the reduction was made. The employees' position is therefore sustained.

Railroad Shops—Wage Reduction

IN DECISION No. 1036, effective July 1, 1922 (see MONTHLY LABOR REVIEW, July, 1922, pp. 94, 100), a wage reduction of 7 cents per hour to many at work in the shop crafts was authorized by the Railroad Labor Board.

On July 10, 1922, the general superintendent of the Brooklyn Eastern District Terminal, a union freight terminal operating in New York Harbor, announced a reduction of 7 cents per hour to employees coming under the provisions of this ruling, the company taking the position that it was not a common carrier subject to the provisions of the interstate commerce or transportation act, and did not therefore violate the act in reducing wages as

per the provisions of Decision No. 1036. The question came before the board as to whether Decision No. 1036 applied to employees of the Brooklyn Eastern District Terminal, and whether the company had the right to reduce wages without first holding a conference with the employees. This was answered in the negative by the board in Decision No. 2615, July 30, 1924, as follows:

> This carrier was under Federal control, and the employees engaged thereon were governed by the wages and working conditions established by and under the authority of the United States Railroad Administration. It was also a party to Docket 26 which was disposed of by Decision No. 108 rendered by the Railroad Labor Board. This carrier is required to make reports to the Interstate Commerce Commission as to its revenues and expenses, in the same manner as is done by other switching and terminal companies. It was decided by the United States Supreme Court (United States *v.* Brooklyn Eastern District Terminal, 249 U. S. 296) "that the terminal is a common carrier within the meaning of the hours of service act," and the provisions of the Adamson law have been adhered to on this property.
>
> *Opinion.*—The Brooklyn Eastern District Terminal is a common carrier within the meaning and intent of the transportation act, 1920, and, therefore, the case in question comes properly within the jurisdiction of the Railroad Labor Board. The evidence submitted does not indicate that the carrier complied with the provisions of the transportation act, 1920, and rules of this board when it reduced the wages of its shop employees as hereinbefore outlined. The procedure necessary to be followed when questions of this character arise is fully outlined in the transportation act, 1920, and in numerous decisions of this board, and in view of the fact that the procedure therein outlined has not been followed in this particular case, it is necessary for this board to rule that the change, as made, was not proper.
>
> *Decision.*—The application of Decision No. 1036 to the shop employees of the Brooklyn Eastern District Terminal was in violation of the transportation act, 1920, and decisions of this board. The conditions in effect immediately prior to such change shall be restored and continued in full force and effect until changed in conformity with said transportation act, 1920, and decisions of this board.

Railway Clerks—Wage Increase

THE Railroad Labor Board rendered a decision, No. 1986 (see MONTHLY LABOR REVIEW, April, 1924, pp. 105–6), effective October 16, 1923, increasing the wages of clerks and station employees represented by the Brotherhood of Railway and Steamship Clerks, Freight Handlers, Express and Station Employees on 40 roads. The Pere Marquette Railway did not apply the increases provided for. The Brotherhood of Railway Clerks, after several efforts to have the management comply with the above decision, appealed to the Railroad Labor Board, which rendered a decision, No. 2510, July 2, 1924.

The carrier stated that it could not apply the decision because that would cause a reduction to certain classes of employees who were receiving a higher rate than that authorized by the board. The brotherhood obtained a letter from the secretary of the board under date of November 8, 1923, reading in part as follows:

> Section 2 of Article III of Decision No. 1986 provides the manner in which the increase established by that decision shall be applied. It was not the board's intention, that any portion of the increase established by Decision No. 1986 should be subject to an application that would result in reducing the rate of pay of any employee.

The carrier contended that the Brotherhood of Railway Clerks did not represent a majority of the clerical and station forces on its road and "In view of this situation that no action should be taken as to carrying out the provisions of Decision No. 1986 until this con-

troversy as to representation, which is now fairly before the board, has been disposed of."

The decision of the board was as follows:

Decision.—(*a*) The employees' contention that higher rates of pay in effect by action of the carrier shall not be reduced in applying Decision No. 1986, is sustained.

(*b*) Inasmuch as the question of representation was not raised in the proceedings resulting in Decision No. 1986, the carrier shall confer with the System Board of Adjustment, Brotherhood of Railway and Steamship Clerks, Freight Handlers, Express and Station Employees, on or before July 15, 1924, and arrange for the application of Decision No. 1986 to the employees who have not received the benefit of the increases provided therein.

Top Dock Ore Workers

THE Brotherhood of Railway and Steamship Clerks, representing the top dock ore workers of the Duluth, South Shore & Atlantic Railway and the Mineral Range Railroad Co. on May 15, 1924, asked the Railroad Labor Board the following questions:

(*a*) Shall the agreement on wages and working conditions reached by the parties at interest to cover the season of 1923 remain in full force and effect for the season of 1924 unless changed by mutual consent by the parties signatory thereto or by decision of the Railroad Labor Board?

(*b*) What rates of pay and working conditions should be in effect by the proper application of decisions of the Railroad Labor Board?

The facts seem to be as follows: On March 19, 1924, a conference was held in Marquette, Mich., between the representatives of three carriers, including those above named, and the representatives of the Brotherhood of Railway and Steamship Clerks, Freight Handlers, Express and Station Employees, relative to rates to be paid top dock ore workers, members of the brotherhood, for the season of 1924. The employees demanded a rate of 64 cents per hour for day work and 65 cents per hour for night work, which the carrier refused to pay on the ground that 53½ cents was the highest rate payable then under the award of the Labor Board, a rate that a competing railroad was paying the dock men.

The dock men advised the carriers that it would be useless to entertain any rate other than the 64 cents and the 65 cents rate per hour, as a vote had already been taken upon the matter and their minds were made to stand on the rates proposed.

The conference adjourned with the ultimatum from the carriers' representatives that the employees would either accept the proposal made by the management or the management would let the work on the iron-ore docks out to contractors. March 24 the representatives of the employees notified their respective carriers that the employees had refused to modify their demands, wherefore the carrier immediately contracted out the work at 50 cents per hour for day work and 51½ cents per hour for night work, 10 hours a day to be worked.

The employees contended that the agreement of 1923 should remain in force until changed by consent of both parties or by a decision of the Railroad Labor Board, and that the contracting of the work to outsiders at reduced rates constituted a violation of the agreement by the carrier.

Employees requested that they be reimbursed in the amount of moneys they would have earned had the carrier fulfilled the agreement referred to, this to apply until such time as the case is decided by the Railroad Labor Board; and that the Labor Board order the carrier to pay in the future the legal rates of pay that should be in effect by the proper application of previous decisions of the board.

The Railroad Labor Board, in Decision No. 2508, July 2, 1924, rendered its opinion and decision as follows:

Opinion.—The evidence presented in this case indicates that immediately prior to the opening of the 1923 season the employees submitted to the carrier a proposed schedule of rates and rules, and in conference with carrier gave notice that they would not report for work at the beginning of the season unless their demands were granted. As a result of this procedure this carrier paid to these employees a rate of 6 cents per hour higher than was paid by other carriers for identical service during the season of 1923. It is apparent that the same tactics were being pursued by the employees in the negotiations preceding the opening of the 1924 season, and under the circumstances the board is of the opinion that the carrier was justified in contracting the work in order that the docks would be ready for operation for the beginning of the ore movement. Therefore, the Labor Board decides:

Decision.—(*a*) That the employees involved in this dispute automatically removed themselves from the service by refusing to report for work at the beginning of the season unless their demands as to wages and rules were granted, and their request for reinstatement with compensation for wage loss sustained is denied.

(*b*) Having removed themselves from the service, they are without authority to negotiate any questions as to rates of pay, and the dispute as to the proper rate under application of decision of the Labor Board is dismissed.

Train Dispatchers—Representation

THE question of proper representation is one that has been before the Labor Board several times. It recently came before the board again in the case of the train dispatchers on the Southern Pacific Lines in Texas and Louisiana. It seems that, as a result of the promulgation of a decision, No. 1612, February 19, 1923, a ballot was taken to determine the wishes of the train dispatchers on the question of representation. The election, conducted in April, 1923, showed that a majority of the train dispatchers preferred representation by the American Train Dispatchers' Association.

May 20, 1924, the carriers requested the Labor Board to direct the holding of another ballot, inasmuch as a majority of the trick train dispatchers had addressed letters to their superintendent advising that they had revoked the authority given the American Train Dispatchers' Association to represent them and requesting permission to deal with the carrier through a committee of their own selection. Following this request meetings were held, and at one of these, May 8, 1924, the representatives of the association declined to agree to the spreading of a ballot, stating that improper influence had been brought to bear upon the train dispatchers, which the carrier denied. The evidence on both sides is spread at length in the decision of the board, No. 2512, July 2, 1924. The position of the board is shown in its opinion and decision as expressed in the following extract:

Opinion.—Some 16 months ago an election was held on this property to determine the wishes of the train dispatchers with reference to representation, which resulted in the selection of the American Train Dispatchers Association.

After practically one and one-half years of such representation, now come the train dispatchers through a train dispatcher employed by the carrier and

who claims authorization from more than 90 per cent of the trick train dispatchers on this property, expressing dissatisfaction with the American Train Dispatchers Association representation and asking for an opportunity to voice their desires through the medium of a secret ballot.

Decision.—The parties to this dispute shall confer on or before July 15, 1924, for the purpose of arranging for a secret ballot to determine the wishes of the train dispatchers on the Southern Pacific Lines in Texas and Louisiana with respect to representation.

This election shall be held in strict conformity with the plan outlined in Decisions Nos. 218 and 220 and addenda thereto, the result of this election to be promptly reported to the board.

Ladies' Garment Workers—Cleveland

THE discontinuance of the manufacture of skirts because of the cessation of a demand for them led to a notice by a firm in Cleveland that the workers in its skirt department must be released. A protest on the part of the Ladies Garment Workers' Union brought the matter before the impartial chairman, whose decision in Case No. 3044, May 4, 1924, is as follows:

This case is one of the most serious with which the impartial chairman has had to deal during the present year. What is virtually a branch of the firm's activity has been of necessity abandoned, through a change in consumers' demands. Skirts are no longer produced, simply because of one of the periodical alterations in style.

On the other hand, the release of some 36 workers is a matter of the gravest concern. A considerable proportion have been in the industry for some time past, and look forward to remaining. There are no opportunities for employment elsewhere, and the consequence of release is outright unemployment.

Under these circumstances the only practicable course is compromise; that is to say, the requirements of the firm must be met by a substantial measure of relief, while at the same time there be salvaged as much as possible for the benefit of the workers. In the informal conference that followed the actual hearing, the impartial chairman is happy to say that both sides showed an earnest desire to cooperate in arriving at an outcome which, while not identical with their respective desires, was nevertheless accepted as a practicable solution. It is this spirit which has made possible the continued life of the agreement.

The impartial chairman accordingly finds and awards that the firm be authorized to release 5 operators, 7 hand sewers, 3 special machine operators, 2 pressers, 1 cleaner, 1 examiner, and 4 minor operators.

This will leave unreleased 10 operators and 3 hand sewers. In determining the particular persons to be so retained, the principle of seniority shall obtain.

Men's Clothing Industry—Chicago

THE impartial chairman in the clothing industry in Chicago has had occasion of late to protest against the use of profane and threatening language on the part of both employer and employee, as appears in the following extracts:

Trade board cases 618 and 636 (new series), May 6, 1924.

The testimony of both sides is somewhat inconsistent and probably somewhat misleading. The impression the board gets is that the worker is excitable and that his excitability is equaled if not surpassed by the member of the firm, from whom greater self-control might be expected. Of the use of profanity in the shop, of the loss of temper and the display of extreme irritability by the member of the firm the board is convinced and would state plainly that a man who can not or will not exercise self-control is not fit to have charge of workers. The days of

profane and obscene language in the shop are fortunately things of the past, generally speaking, in the clothing industry and will not be tolerated by this board when brought to its notice. Physical violence or threats of physical violence are among other items that are supposed to have disappeared with sweat-shop conditions. The board serves notice upon the worker in this case that he has responsibilities as well as rights in the shop; that he is in the shop to produce and not to waste his time; that he is entitled to respect but must also accord respect to those who employ him. The board serves notice upon the member of the firm that this is not the first complaint as to his excitability, display of temper, and profane language. If workers do not perform their tasks properly, if they are discourteous, he has the right of discipline under the agreement. Having this right there is no occasion for abusive or profane language or threats and the board must insist that occasion for complaints of this nature do not arise in future.

Trade board case 665 (new series), May 6, 1924

The reason given for suspension is that the cutter called the foreman a liar, with a profane adjective attached thereto; that he used the same language in speaking of a cutter who corroborated the foreman's statement; and that he challenged the labor manager in effect to make like charges outside the cutting room.

The charges are not denied. The long tenure of employment of this cutter with the firm is not without weight. But the board feels that the offense is of such a nature that it is for the firm to decide whether the past record will warrant tolerance in this case. The offense in itself merits discharge and the board will not direct reinstatement.

Fancy Leather-Goods Industry—New York City

A CASE somewhat similar to the foregoing called forth the following language from the impartial chairman of the arbitration committee in the fancy leather goods industry of New York City, in Case No. 102, June 13, 1924:

Out of this mass of more or less contradictory testimony it is evident that Mr. L. did refuse settled work and that a great deal of quarreling took place and insulting and abusive language was used.

Without attempting to decide on the merits of all the conflicting testimony of the different parties, the chairman is of the opinion that on account of this refusal to do settled work and more particularly on account of the resentment and trouble which has arisen between Mr. L. and the members of the firm, that such condition exists in this shop as would not justify the return of Mr. L. to his position. It is therefore decided that the discharge is confirmed.

Printers—San Francisco

AFTER 11 open hearings and numerous meetings, the board of arbitration selected to handle the disagreement between Typographical Union No. 21 of San Francisco on one side, and the San Francisco Printers' Board of Trade and the Franklin Printing Trades Association on the other, made on August 15, 1924, an award which is of special interest as being based, in part, on the argument that workers are entitled to a rising standard of living, or, as the arbitrator puts it, to a "share in the benefits which follow from increased production brought about through advances of mechanical and other scientific improvements." A second point of interest is the insistence that overtime rates should be made sufficiently high to discourage the use of overtime.

The employing printers and their workers in San Francisco had an agreement under which either side must give 90 days' notice of any application for a change in its conditions. It provided that in case of such an application, a committee of two from each side must be appointed to consider it, and if this committee found it impossible to reach a decision within a specified time, it should select a fifth person to serve as chairman, and should then function as a board of arbitration. In the autumn of 1923 the union gave the required notice and followed it in proper time by an application for a number of changes. The joint committee settled a number of these, but finding itself unable to agree upon the questions affecting wage scales, holiday and afternoon shifts, and the pay rates for overtime, they unanimously selected Judge Frank R. Devlin to serve as the fifth member and chairman.

The award of the board sets forth that the wage dispute narrows down to a question of the basic wage, from which the other disputed rates could easily be determined. The union asked for an increase in the day scale from $46 to $54 a week, basing its contention upon the minimum cost and quantity budget published by the United States Bureau of Labor Statistics in 1920, which it had adjusted to the retail prices prevailing in San Francisco in March, 1924. The employers, in opposition, produced charts and graphs showing a downward tendency in the cost of living, which, they held, made any increase in the basic wage entirely unnecessary.

In commenting upon these exhibits, the chairman, who wrote the award, points out that the employers' contention makes no provision for any improvement in the workers' standard of living, apparently considering that if their real wage remains stationary, it is all they can reasonably ask. From this view he dissents.

The employers' charts and exhibits to show comparison of cost of living adopted either the year 1913 or 1914, as shown by Government statistics, the dates uniformly adopted by the Government as being representative of pre-war conditions when compared with subsequent dates. These charts are, of course, dependable and illuminating. They do not, however, include consideration of change in the standard of living during the past 10 years. If instead of adopting the cost of living and therefore the standard of living of 1914, we should go back 10 years further and adopt that cost and therefore the standard of living of 1904, and project the increases upon such standard alone, such course would carry the assumption that there has been no improvement in the standard of living. This view, of course, can not be accepted. What might then have been considered an unnecessary extravagance in the way of food, or clothing, or amusement, or convenience in the home of the wageworker 20 or 30 years ago, to-day is and should be recognized as being well within the reasonable and modest reach of the wage earner and his family. For example, 25 years ago a telephone in the home of the wageworker might by some have been considered an evidence of extravagance, whereas to-day it would be most unreasonable to refuse to recognize it as a convenience approaching a necessity in the functioning of the family and social life. So there are innumerable other items which contribute to the comfort, well-being, and pleasure of home and social living which years ago might have been deemed extravagances which to-day the wageworker demands and has a right to demand as necessary attributes in home and social life. Furthermore, were the standard of living as of a given date to be determined as an anchor for all time, without development or improvement, it would deny to the wage earner his rightful share in the benefits which follow from increased production brought about through advances of mechanical and other scientific improvements.

It is not to be understood that counsel for the employers urged any such hard and fast rule or thought as is hereby being criticised, but this observation, while general in its character, is volunteered in the belief that it has a real bearing

upon the very important fact that consideration must be given to the advance, both past and present, in the standard of living of the wageworker as well as to the changes in the cost of living.

As to the rates of payment for overtime and holiday work, both sides agreed that these were to be regarded in the light of a penalty intended to discourage the use of overtime. The employers, however, thought that the present rate, which for most overtime was time and a half, was sufficient, while the union wished it raised in some cases to double time. The award increased the basic wage rate for day hand work from $46 to $51 a week, and for night work from $49 to $54.50 per week, and gave the rates the union asked for overtime and holiday work, holding that the fact that some employers got along with practically no overtime while others used a good deal showed both that it could be avoided and that the present penalty was not sufficient to lead all employers to do without it.

EMPLOYMENT AND UNEMPLOYMENT

Employment in Selected Industries in August, 1924

EMPLOYMENT in manufacturing industries in August showed an increase over July of 0.2 per cent. This is the first increase shown in this series of monthly comparisons since March. The earnings of employees in August increased 3.7 per cent, and per capita earnings increased 3.5 per cent, this being the first month since February in which employment, total earnings, and per capita earnings have all shown an increase over the preceding month.

The return to work in August of employees who were on vacation in July was more than offset by the large number of employees who were reported on vacation in August, therefore the increase in employment in August is a veritable change from the decreases which with two exceptions have appeared each month since June, 1923.

These unweighted figures, presented by the United States Department of Labor through the Bureau of Labor Statistics, are based on reports from 8,555 establishments in 52 industries, covering 2,428,229 employees whose total earnings during one week in August were $61,032,430. The same establishments in July reported 2,422,592 employees and total pay rolls of $58,849,252.

Five of the nine geographic divisions show satisfactory increases in employment and each of the nine shows a considerable gain in pay-roll totals. The East South Central States show the greatest gain in employment, 1.8 per cent, and also the greatest gain in pay-roll totals, 6.3 per cent, while the East North Central States show only slightly smaller gains, 1 per cent and 6.1 per cent, respectively. The West North Central States show the only decrease in employment of importance—1.2 per cent.

Comparison of Employment in August, 1924, and July, 1924

THE decided improvement in conditions in manufacturing industries is shown by a comparison of August and July reports from identical establishments. In August exactly one-half of the 52 industries showed increases in employment and 35 industries showed increases in pay-roll totals. In the July and June comparison only seven increases in employment were shown and only five increases in pay-roll totals.

The pottery industry shows a gain of 21.6 per cent in employment and a gain of 29.7 per cent in pay-roll totals; the women's clothing industry shows gains of 14.9 per cent and of 39 per cent, respectively, in the two items; the stove industry shows gains of 13.8 per cent and of 16.4 per cent, respectively, in the two items; and the piano and organ industry shows gains of 11.4 per cent in each of the two items. Other industries showing considerable gains both in employment and earnings were: Confectionery, fertilizers, automobile tires, boots and shoes, carpets, silk, and hosiery. The furniture, woolen and worsted goods, automobile, agricultural implement, cotton goods, and paper-box industries all show increases in pay-roll totals of from

9 to 5 per cent, but their increases in employment were from 3.2 per cent to 1.3 per cent only. The iron and steel industry shows an increase of 10.7 per cent in pay-roll totals coupled with a decrease of 2.7 per cent in employment.

The rubber boot and shoe industry dropped nearly one-third of its employees, with a corresponding decrease in pay-roll totals. This was due to the action of a few large establishments in practically closing for repairs or vacation. The machine-tool industry, as was the case in August, 1923, shows a large decrease both in employment and in pay-roll totals (over 13 per cent in each item) due to the vacation season. The shirt and collar industry decreased 8.8 per cent and 12.5 per cent, respectively, in the two items, while the steel shipbuilding industry decreased 7.3 per cent and 5.8 per cent, respectively, in the two items. The slaughtering and meat packing industry shows a drop of 5 per cent in pay-roll totals, but the drop in employment was less than 2 per cent.

Considering the industries by groups, increases in employment are shown in 7 of the 12, and increases in pay-roll totals in all but 1 of the 12 groups. The leather group gained 5 per cent in employment and over 12 per cent in the earnings of employees; the textile group gained 1.7 per cent in employment and 6 per cent in the earnings of employees; and the vehicle group gained 0.6 per cent in employment and over 6 per cent in the earnings of employees. The iron and steel group of industries lost 2 per cent in employment, but gained 4.4 per cent in the earnings of employees. The food group shows the only decrease in pay-roll totals—2.1 per cent. The reversal of conditions in the textile group of industries is the outstanding change in August—a gain of 1.7 per cent in employment as compared with a drop of 7.1 per cent in July and a gain of 6 per cent in pay-roll totals as compared with a drop of 9.1 per cent in July.

For convenient reference the latest figures available relating to all employees, excluding executives and officials, on Class I railroads, drawn from Interstate Commerce Commission reports, are given at the foot of the first and second tables.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS DURING ONE WEEK EACH IN JULY AND AUGUST, 1924

Industry	Establishments	Number on pay roll		Per cent of change	Amount of pay roll		Per cent of change
		July, 1924	August, 1924		July, 1924	August, 1924	
Food and kindred products	978	183,556	183,091	+0.1	$4,627,986	$4,530,703	−2.1
Slaughtering and meat packing	83	82,142	80,712	−1.7	2,083,473	1,979,397	−5.0
Confectionery	245	25,941	28,356	+9.3	484,643	519,163	+7.1
Ice cream	96	7,115	7,026	−1.3	233,088	224,746	−3.6
Flour	272	13,945	14,403	+3.3	366,721	383,885	+4.7
Baking	267	42,650	41,997	−1.5	1,113,517	1,076,891	−3.3
Sugar refining, cane	15	11,763	11,197	−4.8	346,544	346,621	+(1)
Textiles and their products	1,651	474,210	482,072	+1.7	8,591,515	9,106,617	+6.0
Cotton goods	326	160,130	163,480	+2.1	2,326,870	2,459,235	+5.7
Hosiery and knit goods	259	63,864	66,192	+3.6	972,218	1,064,802	+9.5
Silk goods	193	46,669	48,521	+4.0	899,421	995,223	+10.7
Woolen and worsted goods	173	58,686	59,473	+1.3	1,242,208	1,339,732	+7.9
Carpets and rugs	32	18,826	19,631	+4.3	419,475	447,722	+6.7
Dyeing and finishing textiles	86	25,850	25,215	−2.5	556,718	577,015	+3.6
Clothing, men's	257	56,656	55,998	−1.2	1,390,168	1,379,117	−0.8
Shirts and collars	95	20,569	18,755	−8.8	292,726	256,202	−12.5
Clothing, women's	147	11,377	13,070	+14.9	253,565	352,393	+39.0
Millinery and lace goods	83	11,583	11,737	+1.3	238,146	235,176	−1.2

[1] Less than one-tenth of 1 per cent.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS DURING ONE WEEK EACH IN JULY AND AUGUST, 1924—Continued

Industry	Establishments	Number on pay roll		Per cent of change	Amount of pay roll		Per cent of change
		July, 1924	August, 1924		July, 1924	August, 1924	
Iron and steel and their products	1,444	504,169	494,059	−2.0	$12,971,146	$13,542,154	+4.4
Iron and steel	198	223,545	217,617	−2.7	5,570,366	6,164,953	+10.7
Structural ironwork	143	19,119	19,192	+0.4	510,956	526,122	+3.0
Foundry and machine-shop products	675	159,497	156,859	−1.7	4,216,710	4,213,186	−0.1
Hardware	56	30,646	29,965	−2.2	692,740	681,328	−1.6
Machine tools	169	23,523	20,375	−13.4	648,050	560,000	−13.6
Steam fittings and steam and hot-water heating apparatus	116	34,345	34,693	+1.0	980,597	987,020	+0.7
Stoves	87	13,494	15,358	+13.8	351,727	409,545	+16.4
Lumber and its products	1,054	192,274	192,318	+(1)	4,013,952	4,109,121	+2.4
Lumber, sawmills	430	112,153	111,528	−0.6	2,239,470	2,220,913	−0.8
Lumber, millwork	253	30,219	30,206	−(1)	716,793	734,997	+2.5
Furniture	371	49,902	50,584	+1.4	1,057,689	1,153,211	+9.0
Leather and its products	329	101,171	106,217	+5.0	2,174,071	2,439,664	+12.2
Leather	124	22,578	22,813	+1.0	534,724	559,744	+4.7
Boots and shoes	205	78,593	83,404	+6.1	1,639,347	1,879,920	+14.7
Paper and printing	790	147,606	147,631	+(1)	4,412,388	4,427,697	+0.3
Paper and pulp	208	52,200	52,184	−(1)	1,289,037	1,338,253	+3.8
Paper boxes	140	15,102	15,590	+3.2	307,631	322,900	+5.0
Printing, book and job	242	37,216	36,837	−1.0	1,188,218	1,183,032	−0.4
Printing, newspaper	200	43,088	43,020	−0.2	1,627,502	1,583,512	−2.7
Chemicals and allied products	225	74,074	73,939	−0.2	2,192,850	2,185,874	+1.1
Chemicals	89	20,647	20,690	+0.2	516,063	527,809	+2.3
Fertilizers	80	4,355	4,755	+9.2	88,988	95,742	+7.6
Petroleum refining	56	49,072	48,494	−1.2	1,557,799	1,562,323	+0.3
Stone, clay, and glass products	573	96,607	97,859	+1.3	2,450,000	2,533,613	+3.4
Cement	77	24,570	24,574	+(1)	704,696	720,966	+2.3
Brick, tile, and terra cotta	316	30,272	30,452	+0.6	766,542	772,945	+0.8
Pottery	45	8,331	10,131	+21.6	188,426	244,481	+29.7
Glass	135	33,434	32,702	−2.2	790,336	795,221	+0.6
Metal products, other than iron and steel	48	12,670	12,630	−0.3	274,630	277,183	+0.9
Stamped and enameled ware	48	12,670	12,630	−0.3	274,630	277,183	+0.9
Tobacco products	197	42,968	42,577	−0.9	744,560	746,035	+0.2
Chewing and smoking tobacco and snuff	36	9,112	8,892	−2.4	136,132	142,209	+4.4
Cigars and cigarettes	161	33,856	33,685	−0.5	608,428	603,826	−0.8
Vehicles for land transportation	888	407,716	410,035	+0.6	11,356,297	12,045,704	+6.1
Automobiles	222	244,450	47,886	+1.4	6,936,207	7,470,208	+7.7
Carriages and wagons	42	2,536	2,447	−3.5	56,904	56,200	−1.2
Car building and repairing, electric-railroad	180	15,511	15,454	−0.4	433,948	455,151	+4.9
Car building and repairing, steam-railroad	444	145,219	144,248	−0.7	3,929,238	4,064,145	+3.4
Miscellaneous industries	378	185,571	185,201	−0.2	5,069,857	5,088,065	+0.4
Agricultural implements	108	17,825	18,399	+3.2	447,366	477,156	+6.7
Electrical machinery, apparatus, and supplies	115	79,089	79,237	+0.2	2,138,599	2,121,848	−0.8
Pianos and organs	34	5,827	6,494	+11.4	165,962	184,942	+11.4
Rubber boots and shoes	11	13,494	9,552	−29.2	328,827	221,450	−32.7
Automobile tires	72	44,202	48,230	+9.1	1,272,761	1,407,776	+10.6
Shipbuilding, steel	38	25,134	23,289	−7.3	716,342	674,893	−5.8
Total	8,555	2,422,592	2,428,229	+0.2	$58,849,252	$61,032,430	+3.7

[1] Less than one-tenth of 1 per cent.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS DURING ONE WEEK EACH IN JULY AND AUGUST, 1924—Concluded

Recapitulation by Geographic Divisions

Geographic division	Establishments	Number on pay roll		Per cent of change	Amount of pay roll		Per cent of change
		July, 1924	August, 1924		July, 1924	August, 1924	
New England	1,106	332,860	332,075	−0.2	$7,391,115	$7,594,809	+2.8
Middle Atlantic	2,155	729,928	728,374	−0.2	18,802,228	19,283,221	+2.6
East North Central	2,292	753,932	761,367	+1.0	19,906,837	21,118,617	+6.1
West North Central	764	132,772	131,142	−1.2	3,147,203	3,156,095	+0.3
South Atlantic	902	200,621	200,991	+0.2	3,471,980	3,555,301	+2.4
East South Central	348	80,125	81,577	+1.8	1,408,065	1,496,698	+6.3
West South Central	301	67,090	67,846	+1.1	1,383,304	1,450,714	+4.9
Mountain	135	24,166	24,313	+0.6	640,116	642,012	+0.3
Pacific	552	101,098	100,544	−0.5	2,698,404	2,734,963	+1.4
Total	8,555	2,422,592	2,428,229	+0.2	58,849,252	61,032,460	+3.7

Employment on Class I Railroads

June 15, 1924	-------	1,754,328	-------	[1] $222,406,374	-------
July 15, 1924	-------	1,756,871	+0.1	[1] 229,429,757	+3.2

[1] Amount of pay roll for 1 month.

Comparison of Employment in August, 1924, and August, 1923

REPORTS are available from 5,874 establishments for a comparison of employment and pay-roll totals between August, 1924, and August, 1923. These reports, from identical establishments in the two years, show a decrease in 1924 of 15 per cent in employment, a decrease of 17.2 per cent in pay-roll totals, and a decrease of 2.6 per cent in per capita earnings. The total number of employees covered by this comparison in August, 1924, was 1,808,169, whose earnings in one week amounted to $46,150,846, while the number of employees in August, 1923, was 2,127,590, and their earnings in one week amounted to $55,735,022.

Each of the nine geographical divisions shows a large decrease in number of employees in this yearly comparison, and in all but one instance in total pay rolls as well, the small Mountain Division showing an increase of 2.8 per cent in pay-roll totals. The New England States, the Middle Atlantic States, the East North Central States, and the South Atlantic States show the largest losses in employment, in the order named, while the same divisions with one exception show the largest decreases in pay-roll totals.

There were increases in employment in August, 1924, as compared with August, 1923, in 5 of the 52 industries, and increases in pay-roll totals in 8 industries. Cane-sugar refining leads both in increased employment and in increased pay-roll totals with percentages of 13.9 and 22.9, respectively; automobile tires follow with increases of 11.6 per cent and 16.6 per cent, respectively; and newspaper printing, book and job printing, and cement also show increases in both items. Cigars, baking, and confectionery, while showing considerable increase in pay-roll totals, show slightly decreased employment.

The rubber boot and shoe industry shows the astounding decrease in this 12-month comparison of nearly 60 per cent both in employment and earnings, while the carriage, shirt and collar, machine-tool, and foundry and machine-shop industries show decreases of from 25 to 33 per cent in both employment and earnings. Agricultural implements and steel shipbuilding belong to this group as to decreased employment but their decreases in pay-roll totals were smaller while, on the other hand, cotton goods and carpets belong to the group as to decreased pay-roll totals, their decreases in employment were smaller.

Considering the industries by groups we find only one of the nine groups showing increased employment in the 12-month period. This is the paper and printing group, with an increase of 0.4 per cent, and this group also shows increased pay-roll totals of 3.6 per cent. The only other increase shown in the group totals is 8.6 per cent in pay-roll totals in the tobacco group.

The greatest group decreases in employment in the year's time were 21.5 per cent in the iron and steel group, and 17.1 per cent each in the textile and the vehicle group. These three groups also show by far the largest decreases in pay-roll totals, the decreases being in each case several points greater than the decreases in employment.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS DURING ONE WEEK EACH IN AUGUST, 1923, AND AUGUST, 1924

Industry	Establishments	Number on pay roll		Per cent of change	Amount of pay roll		Per cent of change
		August, 1923	August, 1924		August, 1923	August, 1924	
Food and kindred products	611	155,265	144,459	−7.0	$3,302,343	$3,656,594	−3.8
Slaughtering and meat packing	79	88,800	79,413	−10.6	2,152,978	1,945,119	−9.7
Confectionery	78	10,216	9,846	−3.6	179,034	183,546	+2.5
Ice cream	27	2,699	2,500	−7.4	77,596	75,405	−2.8
Flour	207	12,556	11,461	−8.7	321,417	309,012	−3.9
Baking	209	32,207	31,229	−3.0	818,129	832,321	+1.7
Sugar refining, cane	11	8,787	10,010	+13.9	253,189	311,194	+22.9
Textiles and their products	1,258	446,084	368,949	−17.1	9,001,708	7,208,297	−19.9
Cotton goods	227	144,654	112,346	−22.3	2,528,510	1,725,538	−31.8
Hosiery and knit goods	196	58,902	46,096	−21.7	975,013	735,404	−24.6
Silk goods	181	47,959	43,972	−8.3	996,824	908,779	−8.8
Woolen and worsted goods	127	51,415	44,305	−13.8	1,183,317	1,022,301	−13.6
Carpets and rugs	22	21,261	18,146	−14.7	570,934	408,034	−28.5
Dyeing and finishing textiles	65	23,642	21,728	−8.1	515,274	492,484	−4.4
Clothing, men's	175	51,638	46,532	−9.9	1,334,944	1,199,054	−10.2
Shirts and collars	84	22,856	16,998	−25.6	317,117	228,989	−27.8
Clothing, women's	115	12,483	10,529	−15.7	340,192	298,422	−12.3
Millinery and lace goods	66	11,274	9,297	−17.5	239,583	189,292	−21.0
Iron and steel and their products	934	454,760	356,854	−21.5	13,227,628	9,861,284	−25.4
Iron and steel	161	230,445	184,806	−19.8	6,785,408	5,191,002	−23.5
Structural ironwork	107	15,952	13,733	−13.9	443,967	376,161	−15.3
Foundry and machine-shop products	421	149,143	107,715	−27.8	4,372,711	2,937,856	−32.8
Hardware	24	13,036	11,566	−11.3	318,894	258,284	−19.0
Machine tools	65	10,536	7,407	−29.7	307,202	206,839	−32.7
Steam fittings and steam and hot-water heating apparatus	76	19,919	17,842	−10.4	590,988	525,710	−11.0
Stoves	80	15,729	13,785	−12.4	408,458	365,432	−10.5
Lumber and its products	578	118,930	109,840	−7.6	2,616,691	2,444,572	−6.6
Lumber, sawmills	193	60,776	56,674	−6.8	1,262,636	1,150,344	−8.9
Lumber, millwork	165	23,620	22,126	−6.3	576,864	568,460	−1.5
Furniture	220	34,540	31,040	−10.1	777,181	725,768	−6.6
Leather and its products	275	109,597	95,319	−13.0	2,486,027	2,181,470	−12.3
Leather	117	26,577	22,213	−16.4	651,391	544,779	−16.4
Boots and shoes	158	83,020	73,106	−11.9	1,836,636	1,636,691	−10.9

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS DURING ONE WEEK EACH IN AUGUST, 1923, AND AUGUST, 1924—Concluded

Industry	Establishments	Number on pay roll		Per cent of change	Amount of pay roll		Per cent of change
		August, 1923	August, 1924		August, 1923	August, 1924	
Paper and printing	588	109,298	109,741	+0.4	$3,211,445	$3,328,327	+3.6
Paper and pulp	135	42,035	40,985	−2.6	1,085,648	1,055,861	−2.7
Paper boxes	116	12,852	12,033	−6.4	259,132	248,152	−4.2
Printing, book and job	183	22,719	23,541	+3.6	717,316	787,531	+9.8
Printing, newspaper	154	31,692	33,232	+4.9	1,149,349	1,236,783	+7.6
Chemicals and allied products	157	48,245	41,139	−14.7	1,331,474	1,205,578	−9.5
Chemicals	57	13,126	11,202	−14.7	337,850	306,562	−9.3
Fertilizers	66	5,166	4,028	−22.0	101,848	82,065	−19.4
Petroleum refining	34	29,953	25,909	−13.5	891,786	816,951	−8.4
Stone, clay, and glass products	422	68,112	63,462	−6.8	1,810,226	1,687,152	−6.8
Cement	63	16,797	16,898	+0.6	492,019	497,235	+1.1
Brick, tile, and terra cotta	246	19,415	18,826	−3.0	504,865	488,488	−3.2
Pottery	36	7,829	7,580	−3.2	201,871	186,079	−7.8
Glass	77	24,071	20,158	−16.3	611,471	515,350	−15.7
Metal products, other than iron and steel	32	11,389	10,010	−12.1	267,629	225,572	−15.7
Stamped and enameled ware	32	11,389	10,010	−12.1	267,629	225,572	−15.7
Tobacco products	165	30,514	30,208	−1.0	500,390	543,272	+8.6
Chewing and smoking tobacco and snuff	27	3,140	2,908	−7.4	47,811	47,755	−0.1
Cigars and cigarettes	138	27,374	27,300	−0.3	452,579	495,517	+9.5
Vehicles for land transportation	576	401,885	333,363	−17.1	12,823,481	9,850,611	−23.2
Automobiles	157	248,573	212,231	−14.6	8,400,854	6,407,319	−23.7
Carriages and wagons	35	2,301	1,680	−27.0	51,983	37,812	−27.3
Car building and repairing, electric-railroad	135	13,931	12,237	−12.2	406,063	360,577	−11.2
Car building and repairing, steam-railroad	249	137,080	107,215	−21.8	3,964,581	3,044,903	−23.2
Miscellaneous industries	278	173,505	143,325	−17.1	4,653,980	3,958,117	−15.0
Agricultural implements	69	20,008	14,915	−25.4	519,611	397,732	−23.5
Electrical machinery, apparatus, and supplies	96	80,974	70,707	−12.7	2,257,260	1,941,272	−14.0
Pianos and organs	23	6,404	5,577	−12.9	171,404	161,214	−5.9
Rubber boots and shoes	7	15,890	6,724	−57.7	404,034	164,747	−59.2
Automobile tires	55	25,417	28,366	+11.6	684,584	798,319	+16.6
Shipbuilding, steel	28	24,817	17,536	−29.3	617,087	494,833	−19.8
Total	5,874	2,127,590	1,808,169	−15.0	55,735,022	46,150,846	−17.2

Recapitulation by Geographic Divisions

Geographic division							
New England	717	288,383	233,640	−19.0	6,755,004	5,310,751	−21.4
Middle Atlantic	1,632	695,526	584,020	−16.0	18,899,344	15,565,438	−17.6
East North Central	1,588	702,175	597,897	−14.9	20,594,004	16,706,207	−18.9
West North Central	556	108,004	96,362	−10.8	2,561,059	2,345,206	−8.4
South Atlantic	608	153,076	133,844	−12.6	2,724,473	2,397,073	−12.0
East South Central	199	54,478	47,822	−12.2	1,022,036	873,291	−14.6
West South Central	165	41,473	38,395	−7.4	914,965	847,365	−7.4
Mountain	90	15,895	15,445	−2.8	414,156	425,906	+2.8
Pacific	319	68,580	60,744	−11.4	1,849,981	1,679,609	−9.2
Total	5,874	2,127,590	1,808,169	−15.0	55,735,022	46,150,846	−17.2

Employment on Class I Railroads

July 15, 1923	------	1,938,281	------	[1] $254,794,416	------
July 15, 1924	------	1,756,871	−9.4	[1] 229,429,757	−10.0

[1] Amount of pay roll for 1 month.

Per Capita Earnings

PER capita earnings increased in August, 1924, as compared with July, in 37 of the 52 industries here considered; in 1 industry there was no change, and in 14 industries per capita earnings decreased.

In this monthly comparison the women's clothing industry leads all others, with a seasonal increase of 21 per cent. The iron and steel industry is second, with an increase of 13.7 per cent, followed by boots and shoes, furniture, chewing and smoking tobacco, pottery, silk goods, woolen and worsted goods, automobiles, dyeing and finishing textiles, hosiery and knit goods, electric-railroad car repairing, cane sugar refining, and steam-railroad car building and repairing, all with increases of over 4 per cent, the first named having an increase of 8.1 per cent.

The decreases in per capita earnings were all under 3 per cent, except one of 4.9 per cent in the rubber boot and shoe industry, one of 4 per cent in the shirt and collar industry, and one of 3.3 per cent in the slaughtering and meat-packing industry.

Comparing per capita earnings in August, 1924, and in August, 1923, 29 industries show increases in 1924, the only one of unusual size being 13.5 per cent in steel shipbuilding.

Among the 23 industries showing decreased per capita earnings in the yearly comparison the carpet industry shows the largest decrease, 16.2 per cent, followed by cotton goods, 12.1 per cent, and automobiles with a decrease of 10.7 per cent.

COMPARISON OF PER CAPITA EARNINGS, AUGUST, 1924, WITH JULY, 1924, AND AUGUST, 1923

Industry	Per cent of change August, 1924, compared with—		Industry	Per cent of change August, 1924, compared with—	
	July, 1924	August, 1923		July, 1924	August, 1923
Clothing, women's	+21.0	+4.0	Paper boxes	+1.7	+2.3
Iron and steel	+13.7	−4.6	Shipbuilding, steel	+1.7	+13.5
Boots and shoes	+8.1	+1.2	Foundry and machine-shop products	+1.6	−7.0
Furniture	+7.5	+3.9	Petroleum refining	+1.5	+5.9
Chewing and smoking tobacco and snuff	+7.0	+7.8	Automobile tires	+1.4	+4.5
Pottery	+6.7	−4.8	Flour	+1.3	+5.3
Silk goods	+6.4	−0.5	Stamped and enameled ware	+1.2	−4.1
Woolen and worsted goods	+6.4	+0.2	Hardware	+0.6	−8.7
Automobiles	+6.2	−10.7	Printing, book and job	+0.6	+6.0
Dyeing and finishing textiles	+6.2	+4.0	Clothing, men's	+0.4	−0.3
Hosiery and knit goods	+5.7	−3.6	Brick, tile, and terra cotta	+0.2	−0.2
Car building and repairing, electric-railroad	+5.3	+1.1	Pianos and organs	[1]	+8.0
Sugar refining, cane	+5.1	+7.9	Cigars and cigarettes	−0.2	+9.8
Car building and repairing, steam-railroad	+4.1	−1.8	Machine tools	−0.3	−4.3
Paper and pulp	+3.8	−0.2	Lumber, sawmills	−0.3	−2.3
Leather	+3.6	+0.1	Steam fittings and steam and hot-water heating apparatus	−0.4	−0.7
Cotton goods	+3.5	−12.1	Electrical machinery, apparatus, and supplies	−1.0	−1.5
Agricultural implements	+3.3	+2.7	Fertilizers	−1.4	+3.3
Glass	+2.9	+0.7	Baking	−1.8	+4.9
Lumber, millwork	+2.6	+5.2	Confectionery	−2.0	+6.4
Structural ironwork	+2.5	−1.6	Ice cream	−2.4	+4.9
Carriages and wagons	+2.4	−0.4	Millinery and lace goods	−2.5	−4.2
Carpets and rugs	+2.3	−16.2	Printing, newspaper	−2.5	+2.6
Cement	+2.3	+0.5	Slaughtering and meat packing	−3.3	+1.0
Stoves	+2.3	+2.1	Shirts and collars	−4.0	−2.9
Chemicals	+2.1	+6.3	Rubber boots and shoes	−4.9	−3.7

[1] No change.

Time and Capacity Operation

REPORTS in percentage terms from 6,000 establishments show a definite increase in August both in full-time operation and in full-capacity operation. Four per cent of the reporting establishments were idle, 55 per cent were operating on a full-time schedule and 41 per cent on a part-time schedule, while 34 per cent had a full normal number of employees, and 62 per cent were operating with a reduced force.

The establishments in operation were employing 77 per cent of their normal full force of employees, and these employees were working an average of 88 per cent of full time. This is a gain of 3 per cent in capacity operation and a gain of 1 per cent in full-time operation over the reports made by a slightly smaller number of establishments in July, and is a return to the average of full-time operation reported in June and to the average of capacity operation reported in May.

FULL AND PART TIME AND FULL AND PART CAPACITY OPERATION IN MANUFACTURING ESTABLISHMENTS IN AUGUST, 1924

Industry	Establishments reporting		Per cent of establishments operating—		Average per cent of full time operated in establishments operating	Per cent of establishments operating—		Average per cent of full capacity operated in establishments operating
	Total number	Per cent idle	Full time	Part time		Full capacity	Part capacity	
Food and kindred products	705	2	54	44	86	36	63	78
Slaughtering and meat packing	37		38	62	87	27	73	81
Confectionery	185	2	39	59	84	14	84	67
Ice cream	61		87	13	97	61	39	87
Flour	238	2	40	58	78	40	59	82
Baking	174	2	80	18	96	43	55	79
Sugar refining, cane	10		80	20	90	80	20	90
Textiles and their Products	1,036	6	46	48	8	28	66	73
Cotton goods	248	11	40	49	81	37	52	72
Hosiery and knit goods	157	4	34	61	80	21	75	71
Silk goods	131	5	65	31	95	21	74	75
Woolen and worsted goods	136	1	60	39	90	33	66	78
Carpets and rugs	21		62	38	86	24	76	58
Dyeing and finishing textiles	68	1	26	72	82	12	87	64
Clothing, men's	157	4	50	46	87	30	66	78
Shirts and collars	34	15	29	56	86	35	50	83
Clothing, women's	45	2	56	42	88	24	73	70
Millinery and lace goods	39	3	36	62	77	23	74	66
Iron and steel and their products	1,048	3	47	50	86	19	78	67
Iron and steel	132	16	35	49	77	12	72	65
Structural iron work	108		72	28	94	24	76	75
Foundry and machine shop products	493	(1)	47	52	86	19	80	66
Hardware	32		19	81	78	9	91	66
Machine tools	127		50	49	88	9	91	49
Steam fittings and steam and hot-water heating apparatus	91	1	52	47	88	42	57	82
Stoves	65	3	26	71	77	23	74	75
Lumber and its products	816	5	59	36	90	47	48	84
Lumber, sawmills	364	8	61	31	94	59	32	92
Lumber, millwork	170	6	75	19	85	55	39	78
Furniture	282	1	46	53	87	27	72	78
Leather and its products	224	5	57	38	89	21	74	72
Leather	86	13	66	21	94	13	74	64
Boots and shoes	138	1	51	49	86	26	73	76
Paper and printing	527	3	69	28	93	51	46	87
Paper and pulp	139	9	62	29	88	46	45	88
Paper boxes	92	2	50	48	89	33	65	80
Printing, book and job	176	1	66	33	94	38	61	83
Printing, newspaper	120		98	3	100	88	12	97

[1] Less than one half of 1 per cent.

FULL AND PART TIME AND FULL AND PART CAPACITY OPERATION IN MANUFACTURING ESTABLISHMENTS IN AUGUST, 1924—Concluded

Industry	Establishments reporting		Per cent of establishments operating—		Average per cent of full time operated in establishments operating	Per cent of establishments operating—		Average per cent of full capacity operated in establishments operating
	Total number	Per cent idle	Full time	Part time		Full capacity	Part capacity	
Chemicals and allied products	139	4	66	29	88	37	58	72
Chemicals	56	4	64	32	92	29	68	71
Fertilizers	44	9	45	45	74	18	73	55
Petroleum refining	39	----	92	8	98	72	28	91
Stone, clay, and glass products	432	5	67	28	92	48	47	84
Cement	64	----	89	11	99	83	17	97
Brick, tile, and terra cotta	234	4	72	24	92	52	44	85
Pottery	40	----	30	70	82	18	83	77
Glass	94	13	55	32	90	30	57	75
Metal products other than iron and steel	30	7	47	47	90	17	77	65
Stamped and enameled ware	30	7	47	47	90	17	77	65
Tobacco products	120	12	60	28	93	19	69	77
Chewing and smoking tobacco and snuff	28	4	43	54	86	18	79	71
Cigars and cigarettes	92	14	65	21	95	20	66	79
Vehicles for land transportation	674	1	53	45	91	38	61	98
Automobiles	149	4	30	66	79	8	88	57
Carriages and wagons	33	6	64	30	90	21	73	66
Car building and repairing, electric-railroad	135	----	79	21	97	63	37	93
Car building and repairing, steam-railroad	357	[1]	52	48	93	42	57	84
Miscellaneous industries	241	6	52	42	89	22	72	71
Agricultural implements	65	11	42	48	85	15	74	68
Electrical machinery, apparatus, and supplies	70	1	43	56	87	26	73	73
Pianos and organs	18	----	67	33	91	44	56	85
Rubber boots and shoes	8	25	25	50	91	----	75	80
Automobile tires	58	7	59	34	91	29	64	78
Shipbuilding, steel	22	----	91	9	97	----	100	47
Total	5,992	4	55	41	88	34	62	77

[1] Less than one-half of 1 per cent.

Wage Changes

TWELVE establishments in eight industries reported wage-rate increases during the month ending August 15, while 77 establishments in 23 industries reported wage-rate decreases.

The increases affected over 4,000 employees and averaged 13.4 per cent, while the decreases affected 22,623 employees and averaged 9.3 per cent.

The industries most concerned in the decreases were iron and steel, cotton goods, lumber (sawmills), and hosiery and knit goods.

WAGE ADJUSTMENT OCCURRING BETWEEN JULY 15 AND AUGUST 15, 1924

Industry	Establishments		Amount of increase or decrease in wage rates		Employees affected		
						Per cent—	
	Total number reporting	Number reporting increase or decrease in wage rates	Range	Average	Total number	In establishments reporting increase or decrease in wage rates	In all establishments reporting
			Increases				
			Per cent	*Per cent*			
Confectionery	245	2	4-8	5.3	15	18	(1)
Iron and steel	198	1	15	15.0	2,989	100	(1)
Foundry and machine-shop products	675	3	5-10	9.9	519	58	(1)
Printing, book and job	242	2	10-10.8	10.3	50	31	(1)
Printing, newspaper	200	1	6.7	6.7	285	40	1
Brick, tile, and terra cotta	316	2	10-20	13.6	28	19	(1)
Glass	135	2	5-10	8.1	78	13	(1)
Automobile tires	72	1	10	10.0	100	16	(1)
			Decreases				
			Per cent	*Per cent*			
Slaughtering and meat packing	83	1	3	3.0	100	17	(1)
Cotton goods	326	12	8.5-20	12.5	5,141	88	3
Hosiery and knit goods	259	10	5-10	9.7	2,960	95	4
Silk goods	193	1	10	10.0	80	71	(1)
Carpets and rugs	32	1	10	10.0	310	91	2
Dyeing and finishing textiles	86	1	15	15.0	122	100	(1)
Shirts and collars	95	1	10	10.0	50	60	(1)
Iron and steel	198	13	3-10	7.5	6,135	94	(1)
Structural ironwork	143	1	4	4.0	82	9	(1)
Foundry and machine-shop products	675	3	5-10	6.0	275	60	(1)
Machine tools	169	2	10	10.0	41	35	(1)
Lumber, sawmills	430	13	5-10.4	9.9	4,059	89	4
Lumber, millwork	253	3	8-10	9.4	243	77	1
Furniture	371	2	10	10.0	165	55	(1)
Leather	124	1	4	4.0	120	91	(1)
Boots and shoes	205	3	2.5-10	6.2	627	34	(1)
Fertilizers	80	2	5.8-10	7.9	30	30	1
Brick, tile, and terra cotta	316	2	10	10.5	216	97	1
Pottery	45	1	10	10.0	118	56	1
Glass	135	1	12.5	12.0	490	94	1
Electrical machinery, apparatus, and supplies	115	1	1.3	1.3	995	83	1
Rubber boots and shoes	11	1	12	12.0	190	85	2
Automobile tires	72	1	10	10.0	73	86	(1)

[1] Less than one-half of 1 per cent.

Index of Employment in Manufacturing Establishments

INDEX numbers for August, 1924, for each of the 52 industries surveyed by the Bureau of Labor Statistics, together with a general index for the combined 12 groups of industries, appear in the following table in comparison with index numbers for July, 1924, and August, 1923.

The general index of employment of the Bureau of Labor Statistics for August, 1924, is 85.0.

INDEX OF EMPLOYMENT IN MANUFACTURING INDUSTRIES, AUGUST, 1924, AS COMPARED WITH JULY, 1924, AND AUGUST, 1923

[Monthly average 1923=100.0]

Industry	1923	1924		Industry	1923	1924	
	August	July	August		August	July	August
General index	99.7	84.8	85.0	**Paper and printing**	99.5	97.5	97.5
				Paper and pulp	101.7	91.2	91.2
Food and kindred products	101.6	94.4	94.6	Paper boxes	100.9	93.1	96.1
Slaughtering and meat packing	102.2	92.1	90.5	Printing, book and job	98.5	100.0	99.0
Confectionery	92.8	77.9	85.2	Printing, newspaper	98.3	102.8	102.5
Ice cream	110.9	113.8	112.4				
Flour	106.5	91.9	94.9	**Chemicals and allied products**	98.9	83.7	84.3
Baking	104.1	102.3	100.8	Chemicals	98.1	84.9	85.1
Sugar refining, cane	90.8	108.5	103.3	Fertilizers	90.4	57.4	62.7
				Petroleum refining	103.6	93.7	92.6
Textiles and their products	97.3	78.5	80.7				
Cotton goods	93.9	73.0	74.5	**Stone, clay, and glass products**	102.1	93.7	95.9
Hosiery and knit goods	98.2	77.0	79.8	Cement	101.2	102.1	102.2
Silk goods	99.5	87.7	91.2	Brick, tile, and terra cotta	109.3	102.3	102.9
Woolen and worsted goods	99.4	81.2	82.3	Pottery	103.8	91.4	111.1
Carpets and rugs	100.4	79.3	82.7	Glass	94.6	83.2	81.4
Dyeing and finishing textiles	95.3	80.8	78.8				
Clothing, men's	100.8	90.3	89.3	**Metal products, other than iron and steel**	93.0	81.3	81.0
Shirts and collars	94.4	76.4	69.7	Stamped and enameled ware	93.0	81.3	81.0
Clothing, women's	98.5	71.3	81.9				
Millinery and lace goods	99.2	81.2	82.3	**Tobacco products**	94.5	93.1	92.5
				Chewing and smoking tobacco and snuff	97.7	97.2	94.8
Iron and steel and their products	102.3	80.4	78.9	Cigars and cigarettes	93.9	92.6	92.2
Iron and steel	103.3	84.4	82.1				
Structural ironwork	104.1	91.5	91.9	**Vehicles for land transportation**	101.8	83.6	83.7
Foundry and machine-shop products	104.0	76.7	75.4	Automobiles	99.7	82.4	83.6
Hardware	101.8	85.0	83.1	Carriages and wagons	99.6	76.4	73.7
Machine tools	81.7	78.8	68.2	Car building and repairing electric-railroad	100.7	87.8	87.5
Steam fittings and steam and hot-water heating apparatus	102.2	93.5	94.4	Car building and repairing, steam-railroad	103.0	84.4	83.8
Stoves	94.6	71.5	81.3				
				Miscellaneous industries	95.6	81.7	80.2
Lumber and its products	102.4	92.7	92.6	Agricultural implements	94.1	64.7	66.8
Lumber, sawmills	103.5	93.2	92.7	Electrical machinery, apparatus, and supplies	100.7	87.2	87.4
Lumber, millwork	102.6	97.8	97.8	Pianos and organs	100.8	80.9	90.1
Furniture	100.1	87.9	89.1	Rubber boots and shoes	98.1	62.6	44.3
				Automobile tires	84.2	90.0	98.2
Leather and its products	98.5	83.2	87.3	Shipbuilding, steel	96.2	80.0	74.2
Leather	97.4	81.1	82.0				
Boots and shoes	99.5	83.9	89.0				

The following table shows the general index of employment in manufacturing industries from June, 1914, to August, 1924, based on figures published by the Bureau of Labor Statistics:

GENERAL INDEX OF EMPLOYMENT IN MANUFACTURING INDUSTRIES, JUNE, 1914, TO AUGUST, 1924

[Monthly average 1923=100.0]

Month	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924
January	.....	91.9	104.6	117.0	115.5	110.1	116.1	76.8	87.0	98.0	95.4
February	.....	92.9	107.4	117.5	114.7	103.2	115.6	82.3	87.7	99.6	96.6
March	.....	93.9	109.6	117.4	116.5	104.0	116.9	83.9	83.2	101.8	96.4
April	.....	93.9	109.0	115.0	115.0	103.6	117.1	84.0	82.4	101.8	94.5
May	.....	94.9	109.5	115.1	114.0	106.3	117.4	84.5	84.3	101.8	90.8
June	98.9	95.9	110.0	114.8	113.4	108.7	117.9	84.9	87.1	101.9	87.9
July	95.9	94.9	110.3	114.2	114.6	110.7	110.0	84.5	86.8	100.4	84.8
August	92.9	95.9	110.0	112.7	114.5	109.9	109.7	85.6	88.0	99.7	85.0
September	94.9	98.9	111.4	110.7	114.2	112.1	107.0	87.0	90.6	99.8	.....
October	94.9	100.8	112.9	113.2	111.5	106.8	102.5	88.4	92.6	99.3	.....
November	93.9	103.8	114.5	115.6	113.4	110.0	97.3	89.4	94.5	98.7	.....
December	92.9	105.9	115.1	117.2	113.5	113.2	91.1	89.9	96.6	96.9	.....

Employment and Earnings of Railroad Employees, July, 1923, and June and July, 1924

THE following tables show the number of employees and the earnings in various occupations among railroad employees in July, 1924, in comparison with employment and earnings in June, 1924, and July, 1923.

The figures are for Class I roads—that is, all roads having operating revenues of $1,000,000 a year and over.

COMPARISON OF EMPLOYMENT AND EARNINGS OF RAILROAD EMPLOYEES IN JULY, 1924, WITH THOSE OF JUNE, 1924, AND JULY, 1923

[From monthly reports of Interstate Commerce Commission. As data for only the more important occupations are shown separately, the group totals are not the sum of the items under the respective groups]

Month and year	Professional, clerical, and general			Maintenance of way and structures		
	Clerks	Stenographers and typists	Total for group	Laborers (extra gang and work train)	Track and roadway section laborers	Total for group
	Number of employees at middle of month					
July, 1923	174,893	25,391	290,540	74,557	240,515	456,090
June, 1924	167,594	25,106	281,755	66,689	217,977	416,041
July, 1924	166,962	24,967	281,082	67,309	222,003	421,828
	Total earnings					
July, 1923	$21,785,908	$2,979,174	$38,181,773	$6,392,322	$18,353,322	$42,809,993
June, 1924	20,998,306	3,006,539	37,409,570	4,968,597	15,730,099	37,231,227
July, 1924	21,490,750	3,049,286	38,095,460	5,195,648	16,425,656	38,469,542

Month and year	Maintenance of equipment and stores					
	Carmen	Machinists	Skilled trade helpers	Laborers (shops, engine houses, power plants, and stores)	Common laborers (shops, engine houses, power plants, and stores)	Total for group
	Number of employees at middle of month					
July, 1923	142,526	68,845	138,766	50,181	67,717	604,146
June, 1924	114,293	60,908	112,836	44,668	57,677	517,459
July, 1924	113,844	60,496	112,808	44,253	58,184	516,373
	Total earnings					
July, 1923	$20,474,089	$11,135,898	$15,226,106	$4,950,054	$5,627,275	$78,624,080
June, 1924	15,303,340	8,740,645	11,394,555	4,148,276	4,490,199	62,746,120
July, 1924	15,866,333	9,041,073	11,767,722	4,225,465	4,658,876	64,642,323

COMPARISON OF EMPLOYMENT AND EARNINGS OF RAILROAD EMPLOYEES IN JULY, 1924, WITH THOSE OF JUNE, 1924, AND JULY, 1923—Concluded

	Transportation other than train and yard					Transportation (yardmasters, switch tenders, and hostlers)
	Station agents	Telegraphers, telephoners, and towermen	Truckers (stations, warehouses, and platforms)	Crossing and bridge flagmen and gatemen	Total for group	
	Number of employees at middle of month					
July, 1923	31,989	27,705	41,967	23,243	219,083	26,516
June, 1924	31,322	26,532	37,444	23,105	207,890	24,157
July, 1924	31,414	26,536	36,547	23,196	207,613	24,110
	Total earnings					
July, 1923	$4,719,108	$4,027,145	$3,856,315	$1,742,292	$25,968,038	$4,749,992
June, 1924	4,659,122	3,798,046	3,356,365	1,733,012	24,520,659	4,328,065
July, 1924	4,861,901	3,908,013	3,367,788	1,750,627	25,259,655	4,444,186
	Transportation, train and engine					
	Road conductors	Road brakemen and flagmen	Yard brakemen and yard helpers	Road engineers and motormen	Road firemen and helpers	Total for group
	Number of employees at middle of month					
July, 1923	38,876	80,159	54,645	47,182	49,316	341,906
June, 1924	35,379	72,109	48,373	42,848	44,742	307,026
July, 1924	35,519	71,636	48,415	42,302	44,342	305,865
	Total earnings					
July, 1923	$8,790,342	$13,165,556	$8,878,867	$11,983,810	$8,847,059	$64,460,540
June, 1924	7,872,646	11,587,219	7,651,006	10,267,639	7,622,537	56,170,733
July, 1924	8,234,593	12,121,771	7,907,935	10,710,735	7,944,827	58,518,591

Extent of Operation of Bituminous Coal Mines, August 2 to 23, 1924

CONTINUING a series of tables which have appeared in previous numbers of the MONTHLY LABOR REVIEW, the accompanying table shows for a large number of coal mines in the bituminous fields the number of mines closed the entire week and the number working certain classified hours per week from August 2 to August 23, 1924. The number of mines reporting varied each week, and the figures are not given as being a complete presentation of all mines, but are believed fairly to represent the conditions as to regularity of work in the bituminous mines of the country. The mines included in this report ordinarily represent from 55 to 60 per cent of the total output of bituminous coal. The figures are based on data furnished the Bureau of Labor Statistics by the United States Geological Survey.

WORKING TIME IN THE BITUMINOUS COAL MINES IN THE UNITED STATES, BY WEEKS, AUGUST 2 TO AUGUST 23, 1924

[The mines included ordinarily represent from 55 to 60 per cent of the total output. Prepared by the Bureau of Labor Statistics from data furnished by the United States Geological Survey]

Week ending—	Number of mines reporting	Mines—															
		Closed entire week		Working less than 8 hours		Working 8 and less than 16 hours		Working 16 and less than 24 hours		Working 24 and less than 32 hours		Working 32 and less than 40 hours		Working 40 and less than 48 hours		Working full time of 48 hours or more	
		No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent
1924																	
Aug. 2	2,415	1,108	45.9	27	1.1	122	5.1	240	9.9	307	12.7	243	10.1	189	7.8	179	7.4
9	2,304	1,076	46.7	28	1.2	144	6.3	197	8.6	246	10.7	231	10.0	194	8.4	188	8.2
16	2,298	1,059	46.1	30	1.3	126	5.5	222	9.7	251	10.9	237	10.3	221	9.6	152	6.6
23	2,274	1,020	44.9	29	1.3	107	4.7	199	8.8	274	12.0	207	9.1	232	10.2	206	9.1

Recent Employment Statistics

Public Employment Offices

Connecticut

THE commissioner of the Department of Labor and Factory Inspection of Connecticut has furnished the following report regarding the five free public employment offices of that State for July, 1924:

SUMMARY RECORD OF CONNECTICUT PUBLIC EMPLOYMENT OFFICES FOR JULY, 1924

Sex	Applications for employment	Applications for help	Situations secured	Per cent of applicants placed		Per cent of applications for help filled	
				July, 1924	June, 1924	July, 1924	June, 1924
Males	2,190	1,353	1,242	56.7	56.7	91.8	(1)
Females	1,778	1,340	1,240	69.7	68.8	92.5	(1)
Total	3,968	2,693	2,482	62.6	61.8	92.2	89.4

[1] Not reported separately.

Iowa

In July, 1924, there were 42 jobs offered for men and 69.8 jobs for women per 100 applicants of each sex. For common labor the number of jobs per 100 applicants was only 28.7, which, however, was 6.9 higher than the June rates.

During July and August, Sioux City, the entrance to the harvest belt, usually has a labor shortage. The South Dakota harvest being delayed by weather conditions, however, there was an oversupply of common labor this year in July—1,642 applicants to 936 jobs. Regular applicants for farm labor at the Sioux City office numbered 100 to 30.5 jobs. For all kinds of farm labor at all offices there were 100 applicants to 48.5 jobs.

The report of the State placement service for July, 1924, is as follows:

ACTIVITIES OF IOWA PUBLIC EMPLOYMENT OFFICES IN JULY, 1924

Sex	Number of applicants for positions	Number of jobs offered	Number of persons referred to positions	Number reported placed in employment
Men	5,363	2,213	2,156	2,110
Women	1,433	1,000	934	907
Total	6,796	3,213	3,090	3,017

Ohio

The Ohio State-City Employment Service, cooperating with the United States Employment Service, reports as follows for July, 1924:

OPERATIONS OF OHIO PUBLIC EMPLOYMENT OFFICES, JULY, 1924

Sex, and kind of employment	Total number of applicants	Number of persons applied for	Persons referred to positions	Persons reported placed
Males:				
Nonagricultural	33,998	7,616	7,690	7,002
Farm and dairy	906	770	805	643
Total	34,904	8,386	8,495	7,645
Females	18,792	5,868	5,822	5,057
Grand total	53,696	14,254	14,317	12,702

Pennsylvania

A summary is given below of the reports of the Pennsylvania State employment offices for the period March to June, 1924, and for June, 1921, 1922, and 1923:

OPERATION OF PENNSYLVANIA PUBLIC EMPLOYMENT OFFICES IN JUNE, 1924, AS COMPARED WITH OTHER SPECIFIED MONTHS

Month and year	Persons applying for positions			Persons asked for by employers			Persons receiving positions		
	Men	Women	Total	Men	Women	Total	Men	Women	Total
June, 1921 (5 weeks)	51,645	3,201	54,846	6,477	1,647	8,124	5,798	1,145	6,943
June, 1922 (5 weeks)	23,738	4,544	28,282	14,803	2,572	17,375	12,626	1,910	14,536
June, 1923	13,805	3,130	16,935	16,135	2,927	19,062	10,969	1,730	12,699
1924:									
March (4 weeks)	10,405	2,524	12,929	7,658	1,647	9,305	6,899	1,134	8,033
April (5 weeks)	12,983	3,449	16,432	9,392	2,324	11,716	8,940	1,621	10,561
May (4 weeks)	9,218	4,020	13,238	6,011	1,763	7,774	5,677	1,273	6,950
June	8,554	4,146	12,700	4,669	1,481	6,150	4,399	1,220	5,619

State Departments of Labor

Illinois

THE Illinois Department of Labor reports as follows on volume of employment in specified industries in the State for July, 1924.

PER CENT OF CHANGE IN NUMBER ON PAY ROLLS IN VARIOUS INDUSTRIES IN ILLINOIS, FROM JULY, 1923, AND JUNE, 1924, TO JULY, 1924

Industry	Number of employees	Per cent of change	
		June, 1924, to July, 1924	July, 1923, to July, 1924
Stone, clay, and glass products:			
Miscellaneous stone and mineral products	1,269	−6.2	−16.2
Lime, cement, and plaster	361	−1.6	−8.7
Brick, tile, and pottery	4,960	+1.5	−4.6
Glass	4,442	−6.5	−.3
Total	11,032	−2.9	−4.5
Metals, machinery, and conveyances:			
Iron and steel	30,649	−7.0	−17.9
Sheet metal work and hardware	7,659	−5.5	−11.5
Tools and cutlery	1,207	−13.5	−35.1
Cooking, heating, ventilating apparatus	4,291	−14.4	−18.0
Brass, copper, zinc, babbitt metal	2,393	−.1	−9.6
Cars and locomotives	13,014	−3.1	−21.1
Automobiles and accessories	7,142	−7.2	−38.8
Machinery	15,712	−4.6	−12.7
Electrical apparatus	45,244	−5.0	+13.1
Agricultural implements	5,336	−6.9	−40.2
Instruments and appliances	2,585	−3.6	+8.1
Watches, watch cases, clocks, jewelry	5,050	−31.0	+7.9
Total	140,282	−7.1	−11.2
Wood products:			
Saw mill and planing mill products	2,622	+3.5	−3.3
Furniture and cabinet work	6,280	−4.4	−13.1
Pianos, organs, and other musical instruments	2,370	−10.7	−30.4
Miscellaneous wood products	2,777	+.5	−15.4
Household furnishings	584	−2.3	−14.5
Total	14,633	−3.2	−14.6
Furs and leather goods:			
Leather	1,395	−21.4	−42.8
Furs and fur goods	71	+4.4	−23.0
Boots and shoes	9,923	−0.0	−2.7
Miscellaneous leather goods	1,563	−6.9	−7.7
Total	12,952	−3.7	−9.2
Chemicals, oils, paints, etc.:			
Drugs and chemicals	1,714	−17.0	−30.9
Paints, dyes, and colors	2,097	−8.2	−10.9
Mineral and vegetable oil	3,236	−5.7	−25.8
Miscellaneous chemical products	3,114	−10.8	−29.2
Total	10,161	−9.9	−25.6
Printing and paper goods:			
Paper boxes, bags, and tubes	3,651	+.2	−1.4
Miscellaneous paper goods	872	+0.0	−9.2
Job printing	8,409	+4.5	+2.0
Newspapers and periodicals	3,451	−4.1	+5.1
Edition bookbinding	1,196	−2.0	----------
Total	17,579	+1.1	+.7
Textiles:			
Cotton goods	1,115	−2.2	−9.8
Knit goods, cotton, and woolen hosiery	1,187	−37.0	−29.1
Thread and twine	601	−3.8	−14.3
Total	2,903	−20.4	−21.6

PER CENT OF CHANGE IN NUMBER ON PAY ROLLS IN VARIOUS INDUSTRIES IN ILLINOIS, FROM JULY, 1923, AND JUNE, 1924, TO JULY, 1924—Concluded

Industry	Number of employees	Per cent of change	
		June, 1924, to July, 1924	July, 1923, to July, 1924
Clothing, millinery, and laundering:			
Men's clothing	12,839	+0.4	−17.1
Men's shirts and furnishings	777	−3.1	−15.2
Overalls and work clothing	791	−2.1	−14.4
Men's hats and caps	42	−27.6	−68.4
Women's clothing	1,075	+7.0	−14.7
Women's underwear and furnishings	504	+12.5	−33.6
Women's hats	851	+2.0	+43.8
Laundering, cleaning, and dyeing	2,318	+2.1	−4.3
Total	19,197	+1.0	−14.6
Food, beverages, and tobacco:			
Flour, feed, and other cereal products	895	−.1	−4.3
Fruit and vegetable canning and preserving	1,274	+128.7	−2.6
Groceries not elsewhere classified	4,460	+4.4	+.3
Slaughtering and meat packing	22,803	−.3	−18.5
Dairy products	3,666	+.2	+4.4
Bread and other bakery products	2,764	−.6	+1.6
Confectionery	2,306	−2.8	−2.3
Beverages	1,325	−5.4	−21.9
Cigars and other tobacco products	1,380	+2.1	−15.2
Manufactured ice	349	+14.1	−25.7
Ice cream	768	+5.4	.....
Total	41,990	+1.9	−12.8
Total, all manufacturing industries	270,729	−4.5	−13.7
Trade—Wholesale and retail:			
Department stores	3,070	−2.3	−.8
Wholesale dry goods	564	−.5	−38.5
Wholesale groceries	698	−4.6	−5.3
Mail order houses	14,488	−7.4	−8.9
Total	18,820	−6.3	−14.3
Public utilities:			
Water, light, and power	15,267	−.7	+14.2
Telephone	26,007	+1.8	+3.3
Street railways	27,155	−.2	+4.2
Railway car repair shops	11,907	−.3	−19.9
Total	80,336	+.3	+3.0
Coal mining	10,949	+7.6	−33.4
Building and contracting:			
Building construction	6,385	−4.4	−23.5
Road construction	1,024	−7.7	+27.3
Miscellaneous contracting	1,455	+19.8	−7.7
Total	8,864	−1.6	−15.2
Grand total, all industries	389,698	−3.2	−9.3

Iowa

The statistics given below, showing percentage changes in the number of employees in specified industries in Iowa in July, 1924, in comparison with the previous month were furnished by the Bureau of Labor Statistics of that State:

CHANGES IN VOLUME OF EMPLOYMENT IN IOWA, JUNE TO JULY, 1924

Industry group	Employees on pay roll, July, 1924	
	Number	Per cent of increase (+) or decrease (−) compared with June, 1924
Food and kindred products:		
Meat packing	6,582	−0.1
Cereals	1,151	+7.7
Flour and mill products	117	
Bakery products	823	−.9
Confectionery	447	−4.7
Poultry, produce, butter, etc.	1,104	−8.5
Sugar, sirup, starch, glucose	601	−13.2
Other food products, coffee, etc.	391	−1.3
Total	11,216	−1.3
Textiles:		
Clothing, men's	742	−9.2
Millinery	166	+40.7
Clothing, women's woolen goods	455	−3.8
Gloves, hosiery, awnings, etc.	623	−10.4
Buttons, pearl	445	−31.1
Total	2,431	−11.6
Iron and steel work:		
Foundry and machine shops (general classification)	2,018	−12.1
Brass and bronze products, plumbers' supplies	465	−10.4
Automobiles, tractors, engines, etc.	751	−6.1
Furnaces	226	−1.7
Pumps	319	+.6
Agricultural implements	792	−15.0
Washing machines	1,248	+7.0
Total	5,819	−5.5
Lumber products:		
Mill work, interiors, etc.	2,959	−2.6
Furniture, desks, etc.	437	−7.0
Refrigerators	125	−2.4
Coffins, undertakers' goods	163	+1.9
Carriages, wagons, truck bodies	171	+11.0
Total	3,855	−2.4
Leather products:		
Shoes	332	+11.0
Saddlery and harness	151	−14.7
Fur goods and tanning, also leather gloves	175	+2.9
Total	658	+1.9
Paper products, printing and publishing:		
Paper and paper products	290	−9.9
Printing and publishing	2,590	+.2
Total	2,880	+1.0
Patent medicines	587	+5.4
Stone and clay products:		
Cement, plaster, gypsum	2,148	+4.1
Brick and tile (clay)	889	−3.7
Marble and granite, crushed rock and stone	148	+1.4
Total	3,185	+1.7
Tobacco, cigars	178	−2.2
Railway car shops	2,695	+1.2
Various industries:		
Auto tires	197	−0.6
Brooms and brushes	179	−3.3
Laundries	275	+.7
Mercantile	3,098	+.2
Public service	357	+8.5
Seeds	119	−17.9
Wholesale houses	1,007	−10.4
Other industries	894	+5.7
Total	6,126	−1.4
Grand total	39,630	−2.3

Maryland

The following statistics are taken from a more detailed statement on volume of employment and amounts of pay rolls in August, 1924, in Maryland industries, which was furnished by the Commissioner of Labor and Statistics of that State:

COURSE OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS IN MARYLAND, JULY TO AUGUST, 1924

Industry	Number on pay roll one week in August, 1924	Per cent of increase (+) or decrease (−), August, compared with July, 1924	Amount of pay roll one week in August, 1924	Per cent of increase (+) or decrease (−), August, compared with July, 1924
Bakery	675	+5.4	$12,910.87	+1.3
Beverages and soft drinks	284	+.4	8,197.50	+4.2
Boots and shoes	1,189	+4.2	19,552.89	+6.4
Boxes, fancy and paper	523	+2.7	7,386.34	+4.9
Boxes, wooden	432	−12.2	7,936.11	+2.4
Brass and bronze	2,320	+1.5	51,315.69	−1.3
Brick, tile, etc	970	+4.4	23,864.71	+8.3
Brushes	989	+2.0	18,393.93	+6.5
Canning and preserving	501	+11.3	8,049.79	+13.9
Car building and repairing	4,497	+.1	143,705.47	+.01
Chemicals	1,142	+.2	31,292.21	+.9
Clothing, men's outer garments	2,736	−2.1	63,336.47	−2.4
Clothing, women's outer garments	951	−3.0	12,125.48	+1.3
Confectionery	635	+5.6	8,978.52	+13.9
Cotton goods	1,338	+6.2	20,923.48	+9.0
Fertilizer	705	+3.6	15,638.39	+8.6
Food preparation	142	+1.4	3,300.46	+3.7
Foundry	1,593	−.7	37,942.95	+4.5
Furnishing goods, men's	2,421	−22.0	29,331.13	−19.4
Furniture	701	+4.6	16,964.23	+7.3
Glass	909	−15.4	18,636.43	+4.2
Hats, straw	508	−12.9	7,687.53	−21.7
Ice cream	401	−9.3	12,262.13	−.8
Leather goods	652	+16.6	12,069.19	+13.8
Lithographing	469	−4.3	13,006.39	−5.5
Lumber and planing	1,203	+4.6	21,919.92	+4.2
Mattresses and spring beds	141	−2.8	3,272.52	+3.4
Patent medicine	657	+1.5	10,272.81	−.4
Pianos	851	−4.8	21,832.60	+5.6
Plumbers' supplies	962	+1.5	28,403.32	+3.8
Printing	1,254	−4.9	40,069.83	−9.5
Rubber tire manufacturing	[1] 2,157	+2.6	57,345.80	+9.4
Shipbuilding	509	+2.4	13,479.85	−18.1
Shirt manufacturing	835	+3.9	10,238.65	−1.4
Silk goods	479	−11.2	6,613.54	+1.7
Slaughtering and meat packing	1,287	−1.0	33,461.27	−7.6
Stamped and enameled ware	775	+.2	14,401.29	+.5
Stoves	318	−12.7	6,250.74	−20.4
Tinware	3,772	+1.3	74,808.90	+.7
Tobacco	983	+3.3	13,458.11	−4.7
Umbrellas	526	−.8	7,709.52	−8.8
Miscellaneous	2,883	−2.1	62,609.31	−6.2

[1] Pay roll period one-half week.

Massachusetts [1]

There was a shrinkage of almost 3 per cent in volume of employment in Massachusetts industries in June, 1924, in comparison with the previous month, as shown by the pay rolls of 850 manufacturing establishments of the State. The numbers of employees in the individual industries in the two months in corresponding pay-roll weeks are here given:

[1] Massachusetts. Department of Labor and Industries. Mimeographed report received Sept. 11, 1924.

COMPARISON OF EMPLOYMENT IN 850 MASSACHUSETTS ESTABLISHMENTS FOR ONE WEEK, INCLUDING OR ENDING NEAREST MAY 15 AND JUNE 15, 1924

Industry	Number of employees on pay roll		Industry	Number of employees on pay roll	
	May, 1924	June, 1924		May, 1924	June, 1924
Automobiles, including bodies and parts	1,161	1,622	Jewelry	2,810	2,713
Boot and shoe cut stock and findings	1,807	1,610	Leather, tanned, curried, and finished	4,390	4,253
Boots and shoes	20,660	16,154	Machine-shop products	5,923	5,592
Boxes:			Machine tools	1,629	1,608
Paper	2,011	2,538	Musical instruments	882	771
Wooden packing	821	813	Paper and wood pulp	6,377	6,244
Bread and other bakery products	3,381	3,518	Printing and publishing:		
Cars and general shop construction and repairs, steam railroads	2,944	2,933	Book and job	2,686	2,670
Clothing:			Newspaper	2,014	2,016
Men's	3,061	2,874	Rubber footwear	6,717	6,177
Women's	992	923	Rubber goods	2,401	2,282
Confectionery	3,010	3,175	Rubber tires and tubes	970	938
Copper, tin, sheet iron, etc	771	750	Silk goods	2,169	2,138
Cotton goods	34,672	36,146	Slaughtering and meat packing	1,391	1,461
Cutlery and tools	4,740	4,596	Stationery goods	1,624	1,595
Dyeing and finishing, textiles	6,161	5,848	Steam fittings and steam and hot-water heating apparatus	1,783	1,535
Electrical machinery, apparatus and supplies	9,171	8,767	Textile machinery and parts	5,241	5,185
Foundry products	2,720	2,654	Tobacco	807	816
Furniture	2,160	2,121	Woolen and worsted goods	13,168	13,730
Hosiery and knit goods	5,216	5,135	All other industries	30,573	29,353
			Total	199,014	193,254

New York

The following report from the State Department of Labor of New York shows the fluctuation in numbers of employees and amounts of pay rolls in certain manufacturing industries in that State from July, 1923, and June, 1924, to July, 1924:

PER CENT OF CHANGE IN VOLUME OF EMPLOYMENT AND PAY ROLLS IN SPECIFIED INDUSTRIES IN NEW YORK STATE, JULY, 1924, AS COMPARED WITH JULY, 1923, AND JUNE, 1924

Industry	Per cent of change—			
	June, 1924, to July, 1924		July, 1923, to July, 1924	
	Number of employees	Amount of pay roll	Number of employees	Amount of pay roll
Cement	+1.3	+1.1	−0.4	+4.0
Brick	+1.2	+3.2	+30.9	+28.3
Pottery	−1.0	−5.5	+8.4	+7.9
Glass	−22.3	−15.0	−29.6	−19.8
Pig iron and rolling-mill products	−7.9	−11.4	−43.3	−52.8
Structural and architectural iron work	−2.4	−.3	+3.4	+2.3
Hardware	−5.1	−13.2	−26.6	−33.3
Stamped ware	−2.2	−3.8	−40.7	−37.3
Cutlery and tools	−15.2	−22.7	−34.6	−44.1
Steam and hot-water heating apparatus	−2.6	−13.2	−15.2	−22.4
Stoves	−31.1	−30.0	−35.8	−37.8
Agricultural implements	−7.4	−6.9	−33.0	−31.6
Electrical machinery, apparatus, etc	−3.7	−3.2	−5.5	−7.1
Foundry and machine shops	−3.8	−7.1	−17.0	−20.4
Automobiles and parts	−10.8	−4.9	−26.7	−27.8
Car, locomotive, and equipment factories	−5.4	−5.4	−33.4	−36.1
Railway repair shops	−3.9	−5.5	−12.9	−14.3
Lumber:				
Millwork	−1.8	−.3	−1.4	+1.7
Sawmills	−2.9	+.4	−7.6	−13.1
Furniture and cabinet work	−2.5	−4.1	−8.4	−8.4
Furniture	−1.9	−3.6	−7.6	−8.3

PER CENT OF CHANGE IN VOLUME OF EMPLOYMENT AND PAY ROLLS IN SPECIFIED INDUSTRIES IN NEW YORK STATE, JULY, 1924, AS COMPARED WITH JULY, 1923, AND JUNE, 1924—Concluded

Industry	Per cent of change—			
	June, 1924, to July, 1924		July, 1923, to July, 1924	
	Number of employees	Amount of pay roll	Number of employees	Amount of pay roll
Pianos, organs, and other musical instruments	−2.4	−5.6	−15.8	−16.7
Leather	−1.0	−.7	−14.0	−16.9
Boots and shoes	+.2	+3.4	−14.3	−18.9
Drugs and chemicals	−6.2	−4.0	−8.9	−5.8
Petroleum refining	+.3	−.6	−7.3	−6.9
Paper boxes and tubes	−1.1	−4.4	−7.8	−10.3
Printing:				
Newspaper	−1.2	−1.7	−18.2	−15.9
Book and job	−1.4	−4.4	−4.6	−3.3
Silk and silk goods	−7.7	−8.1	−26.4	−29.6
Carpets and rugs	−2.2	−2.1	−11.4	−21.6
Woolens and worsteds	−16.1	−15.7	−28.4	−26.9
Cotton goods	−34.9	−41.6	−41.0	−51.4
Cotton and woolen hosiery and knit goods	−16.6	−18.2	−32.2	−40.0
Dyeing and finishing textiles	−2.5	−3.6	−9.4	−11.7
Men's clothing	−.2	+10.6	−8.0	−2.8
Shirts and collars	−4.9	−11.4	−28.1	−35.0
Women's clothing	−19.9	−20.1	−32.8	−36.9
Women's headwear	−10.3	−7.7	−6.6	−3.0
Flour	−1.1	+2.1	[1]	+6.4
Sugar refining	−1.4	−7.3	−5.0	−1.3
Slaughtering and meat products	−1.9	−.6	−1.3	−1.6
Bread and other bakery products	−1.4	−.8	−3.4	+.6
Confectionery and ice cream	+.1	−2.8	−6.6	−2.3
Cigars and other tobacco products	−.8	−2.2	−2.5	+.4

[1] No change.

Wisconsin [a]

Volume of employment was 10 per cent lower in Wisconsin manufactures in July, 1924, than in July, 1923, and factory pay rolls showed a reduction of 11.8 per cent in July of this year compared with the corresponding month of last year. There was, however, greater activity in building and railroad construction work in July, 1924.

Recent fluctuations in volume of employment in various Wisconsin industries are indicated in the table following:

PER CENT OF CHANGE IN VOLUME OF EMPLOYMENT AND IN PAY ROLLS IN VARIOUS KINDS OF EMPLOYMENT IN WISCONSIN, JULY, 1924, COMPARED WITH JUNE, 1924, AND JULY, 1923

Kind of employment	Per cent of change—			
	June to July, 1924		July, 1923, to July, 1924 [1]	
	Employment	Pay roll	Employment	Pay roll
Manual				
Agriculture			−11.7	
Logging	−4.7		−5.2	
Mining	−19.3	−20.1	−19.1	−23.9
Lead and zinc	+6.2	+.4	+11.9	+6.0
Iron	−50.0	−45.8	−52.8	−54.0
Stone crushing and quarrying	+5.3	+2.6	−1.3	+18.9

[1] Identical establishments.

[a] Wisconsin Industrial Commission. Wisconsin Labor Market, Madison, July, 1924.

PER CENT OF CHANGE IN VOLUME OF EMPLOYMENT AND IN PAY ROLLS IN VARIOUS KINDS OF EMPLOYMENT IN WISCONSIN, JULY, 1924, COMPARED WITH JUNE, 1924, AND JULY, 1923—Concluded

Kind of employment	Per cent of change—			
	June to July, 1924		July, 1923, to July, 1924	
	Employment	Pay roll	Employment	Pay roll
Manufacturing	+3.7	−2.7	−10.0	−11.8
Stone and allied industries	+3.2	+2.6	−1.5	+8.0
Brick, tile, and cement blocks	+2.5	−2.7	−9.1	−3.4
Stone finishing	+3.8	+5.9	+5.7	+17.7
Metal	−3.1	−8.5	−19.8	−24.8
Pig iron and rolling-mill products	+7.7	+7.6	−28.9	−27.3
Structural-iron work	−11.8	−18.8	−11.5	−12.3
Foundries and machine shops	−4.4	−16.3	−26.0	−44.0
Railroad repair shops	−.1	+.3	−4.0	+2.6
Stoves	−11.3	+18.2	−19.7	−5.8
Aluminum and enamel ware	−8.9	−27.5	−12.6	−34.4
Machinery	−1.7	−10.0	−16.9	−16.5
Automobiles	−.8	−3.5	−23.5	−28.9
Other metal products	−4.8	−14.4	−13.2	−9.2
Wood	−3.0	−10.6	+.2	+1.9
Sawmills and planing mills	−9.8	−14.0	+3.8	+3.4
Box factories	−.2	−9.5	−29.1	−30.1
Panel and veneer mills	−1.5	−6.2	+5.5	+8.4
Sash, doors, and interior finish	−.6	−12.9	+6.0	+6.5
Furniture	+6.6	−5.6	−7.6	+2.5
Other wood products	−3.1	−2.7	+3.6	−3.6
Rubber	+5.9	+6.8	+9.1	+29.0
Leather	+5.4	−3.8	−16.0	−18.1
Tanning	+8.8	−13.0	−8.6	−14.1
Boots and shoes	+7.3	−18.7	−29.0	−45.0
Other leather products	−2.8	+45.8	+.7	−50.4
Paper	+.3	−3.2	−6.8	−4.4
Paper and pulp mills	−.8	−5.9	−6.9	−4.3
Paper boxes	−1.5	−2.9	−15.4	−21.9
Other paper products	+6.6	+10.6	+10.3	+10.6
Textiles	−.4	−7.8	−8.6	−16.8
Hosiery and other knit goods	−.1	−13.5	−7.9	−19.8
Clothing	−.1	+.5	−6.4	−13.9
Other textile products	−3.0	−10.1	−15.6	−14.2
Foods	+52.8	+26.2	−6.3	−12.4
Meat packing	−.4	+1.0	+7.5	+3.4
Baking and confectionery	−2.2	−2.8	−1.9	+1.1
Milk products	−1.2	−.8	−10.0	−2.3
Canning and preserving	+745.3	+429.2	−14.9	−27.2
Flour mills	+8.1	+11.5	−17.5	−11.6
Tobacco manufacturing	+3.0	−9.6	+31.4	+11.8
Other food products	+7.7	+1.6	+2.4	+7.5
Light and power	−9.2	−5.9	−16.9	+4.5
Printing and publishing	.0	+14.7	+8.8	+28.6
Laundering, cleaning, and dyeing	−.5	+21.6	−6.5	+23.2
Chemicals (including soap, glue, and explosives)	−4.2	−3.6	−33.4	−26.8
Construction—				
Building	+7.1	+11.7	+17.4	+10.9
Highway	+21.0	.....	−25.2	.....
Railroad	+1.2	+4.8	+17.9	+11.4
Marine, dredging, sewer-digging	−32.3	−33.3	−25.0	−5.9
Communication—				
Steam railways	−2.6	+1.4	−2.8	−2.4
Electric railways	−2.1	−.4	+1.7	+2.6
Express, telephone, and telegraph	+.2	+.5	+5.2	+13.0
Wholesale trade	+.6	−10.4	−4.7	−21.7
Hotels and restaurants	+3.1	.....	+.4	.....
Nonmanual				
Manufacturing, mines, and quarries	−.9	+.4	−.3	+8.3
Construction	+1.2	+19.0	−15.6	−2.5
Communication	−.2	−.3	+4.7	+6.0
Wholesale trade	+.8	+8.8	+4.1	+14.5
Retail trade—sales force only	+.5	−7.6	−.9	+1.9
Miscellaneous—professional services	+2.9	−3.6	+6.2	+3.0
Hotels and restaurants	+2.1	.....	+2.3	.....

Decasualization of Dock Labor in Seattle

THE Pacific Marine Review, in its issue for August, 1924, publishes an address delivered before the Eleventh National Foreign Trade Convention, describing the methods adopted in Seattle to improve the conditions under which cargo handling along the water front is carried on. Up to 1920 the industry was burdened by a series of strikes, which involved heavy losses to both sides and settled nothing, for the defeated side renewed the contest as soon as it could recuperate. In that year a plan of cooperative control of the industry was undertaken, which up to date has proved practicable and to a large degree successful.

The situation at the outset was complicated in the extreme. Longshore work tends, by its very nature, toward casual employment. Ships must be loaded or unloaded when they arrive or prepare to sail, and it has been taken for granted that there is no way of preventing the extreme variations in employment which this tends to produce. Moreover, in Seattle there were 23 separate steamship, stevedore, and dock companies operating along the water front, whose various interests must be taken into consideration, and both union and nonunion men were employed. The problem was to coordinate these varying interests, and to regularize as far as possible the employment of the men engaged in cargo handling. The method adopted was an employee representation plan on the general lines of a shop committee scheme.

A growing realization of the importance of stevedoring, together with the necessity of maintaining industrial peace, led the water-front employers of Seattle and the longshoremen and dock workers in 1920 to adopt a plan of industrial relations which has proved sound in policy, though open to improvement in detail. The dock council is a legislative body of representatives of men and management where all matters of common interest are decided by equal voting power. To-day on the water front there is equal sharing of control. The habit is well developed of seeking common interests wherever possible, rather than trying to find points of conflict.

Under this plan there is a joint executive committee consisting of 15 representatives of the employers and 15 representatives of the men, elected by secret ballot, and three joint standing committees, each consisting of four representatives of each side.

Of these standing committees, the joint employment committee is in charge of all matters on employment and the conduct of the dispatching hall; the joint standard practice committee handles operative problems and questions of hours and wages; and the joint safety committee devises methods of reducing risk and preventing accidents.

The first step was to reduce the number of men employed on the docks, after which the regularization of employment might be attempted with some hope of success. In September, 1920, there were 1,420 longshoremen registered as available workers along the water front; by August, 1921, the number had been reduced to 612. The first method of reduction adopted was a refusal to permit the floaters who had drifted away from the water front to remain on the list of eligibles or to return to it.

This left available the steady men, mostly men of family. The surplus was further reduced by eliminations based on deliberate examination into every man's qualifications, including length of service on the beach, family status, and skill. The men who were retained had a claim on the industry and were competent.

Of this steady body of skilled longshoremen remaining after the elimination two-thirds are married, four-fifths are citizens, some 25 per cent own their own homes, a majority have telephones and the number who can not read or write is negligible. The net result is that, contrary to the popular impression of longshoremen, the men in this port are useful citizens, skilled workmen, and potentially a safeguard to the city instead of an economic menace.

After the surplus workers had once been disposed of, the chief difficulty in regularizing work lay in the variable demand. "The great problem is to provide a labor reserve sufficient to meet the extreme fluctuations already noticed without creating a surplus." On analyzing the situation, the committee concluded that there were two kinds of demand which must be met: A fairly steady demand for regular work along the water front, and the peak demand of each particular company when a ship is to be loaded or unloaded, but that it was possible to form some idea of the number of men necessary for each purpose. A central dispatching hall was established, through which all orders for workers are placed, and the men were organized into two kinds of groups, company gangs and hall gangs. Each company selects for its own as many gangs as it can assure reasonably steady work, and on these particular gangs it has the first call; the peak needs are met by the hall gangs, which are assigned to any company asking for extra men. "Men are ordered and dispatched by gangs, made up always of the same men, and on the basis of low-earnings-gangs first." The result of this plan is thus summed up:

The system has been in effect long enough to disclose its strength and weakness. Demonstrated advantages are these:

1. Each man has a sure, steady job in his gang, from which he is "fired" only for cause.
2. Earnings of gang men are equalized.
3. It is easier to arrange for enough men, without surplus, by gangs than by individuals.
4. Responsibility for satisfactory work is better fixed in the steady gang than in shifting individuals.
5. There is a regular supply of skilled men available for work and obligated to take it as it comes.

The weaknesses developed are apparently in the operation rather than inherent in the system. To correct them requires further cooperation between men and management, which is steadily developing. The outstanding weakness is that some men abuse their security of job by deliberately slowing down and in other ways failing to cooperate. The abuse of security would seem to be met by the development through cooperation of some system of incentive for better work.

Other advantages mentioned are the development of statistical information under the system, the frequent contact of employers and employees in committees, the reduction of pilferage, and the increased earnings of the men. This last is a natural result from the reduction of the number of men employed on the water front, but its extent could not easily have been shown except through the compilation of figures made easy by the system of employing and paying off the men through the central dispatching hall. This statistical information has been made available and put into such effective form that while in most wage disputes the discussion centers in an hourly rate, on the Seattle water front this has become subordinate in importance to the monthly earnings.

The comparative results observed since the adoption of the joint organization plan are surprising. The average monthly earnings show that in January, 1921, the point of greatest surplus of men, the longshoremen earned only $58 and the dock workers $40. These earnings steadily increased as the decasualization proceeded. Since August, 1921, by which time the surplus of men was elimi-

nated, the earnings for the past two and a half years have averaged for all longshoremen from $140 to $175 and for all dock workers from $100 to $135 per month.

The writer does not give any exact figures as to cost, but declares that the expense involved in a "single severe struggle such as the four months' strike of 1916 would pay all of the expenses of the present peace program for 10 years." The plan, as a whole, he feels, has been thoroughly valuable.

So far the general result of cooperation through joint organization and the consequent decasualization has been to develop a growing good will and understanding, to promote orderly and efficient operation, to improve conditions of the workmen, to provide joint committee machinery for adjusting grievances, and, most valuble to employees, employers, and the community alike, to stabilize the industry.

HOUSING

Building Permits in Principal Cities of the United States, January to June, 1924

ON JULY 1 of this year the Bureau of Labor Statistics mailed a questionnaire to the building inspector in each of the 68 cities of the United States having a population of 100,000 or over in 1920 requesting a report as to building permits issued in the first six months of the year. Similar data for these cities have been collected semiannually since January 1, 1922. For the smaller cities the bureau collects data annually.[a]

There has been so much local interest in statistics on building permits that New York and Massachusetts are now collecting this information from the cities of their States. To avoid duplication of work the Bureau of Labor Statistics is cooperating with these States. Assistance has also been given by Pennsylvania.

For the half year ending June 30, 1924, schedules were received by mail from 58 of the 68 cities. It was necessary for agents of the bureau to visit the other 10 cities and compile the figures from the original official records.

Table 1 shows the total number and estimated cost of each of the different kinds of new buildings covered by permits issued in the 68 cities, the per cent that each kind forms of the total number, the per cent that the cost of each kind forms of the total cost, and the average cost per building.

TABLE 1.—NUMBER AND COST OF NEW BUILDINGS AS STATED BY PERMITS ISSUED IN 68 CITIES, JANUARY 1 TO JUNE 30, 1924, BY KIND OF BUILDING

Kind of building	Buildings for which permits were issued				
	Number	Per cent of total	Estimated cost		
			Amount	Per cent of total	Average per building
Residential buildings					
One-family dwellings	84,098	39.8	$382,573,529	27.2	$4,549
Two-family dwellings	23,964	11.4	202,660,001	14.4	8,457
One-family and two-family dwellings with stores combined	2,031	1.0	22,668,689	1.6	11,161
Multifamily apartments	6,286	3.0	269,422,175	19.2	42,861
Multifamily apartments with stores combined	379	.2	19,269,316	1.4	50,843
Hotels	81	(1)	28,754,845	2.0	354,998
Lodging houses	8	(1)	136,300	(1)	17,038
All other	47	(1)	4,947,629	.4	105,269
Total	116,894	55.4	930,432,984	66.2	7,960

[1] Less than one-tenth of 1 per cent.

[a] For earlier reports by the bureau see Bulletins 295, 318, and 347, and MONTHLY LABOR REVIEW for July, 1921; April, 1922; October, 1922; July, 1923; and October, 1923.

TABLE 1.—NUMBER AND COST OF NEW BUILDINGS AS STATED BY PERMITS ISSUED IN 68 CITIES, JANUARY 1 TO JUNE 30, 1924, BY KIND OF BUILDING—Concluded

Kind of building	Buildings for which permits were issued				
	Number	Per cent of total	Estimated cost		
			Amount	Per cent of total	Average per building
Nonresidential buildings					
Amusement buildings	315	.1	$21,813,015	1.6	$69,248
Churches	332	.2	18,027,860	1.3	54,301
Factories and workshops	1,853	.9	81,236,483	5.8	43,841
Public garages	1,935	.9	30,875,950	2.2	15,957
Private garages	74,824	35.4	40,293,106	2.9	539
Service stations	1,294	.6	3,423,821	.2	2,646
Institutions	76	(1)	12,355,072	.9	162,567
Office buildings	550	.3	100,269,781	7.1	182,309
Public buildings	53	(1)	12,322,158	.9	232,494
Public works and utilities	123	.1	11,885,946	.8	96,634
Schools and libraries	328	.2	67,462,556	4.8	205,679
Sheds	6,746	3.2	2,671,864	.2	396
Stables and barns	123	.1	360,905	(1)	2,934
Stores and warehouses	4,726	2.2	69,502,527	4.9	14,706
All other	951	.5	2,056,527	.1	2,162
Total	94,229	44.6	474,557,571	33.8	5,036
Grand total	211,123	100.0	1,404,990,555	100.0	6,655

[1] Less than one-tenth of 1 per cent.

The table shows that 55.4 per cent of the new buildings for which permits were issued in these cities from January to June, inclusive, of this year were residential buildings and that 66.2 per cent of the estimated cost of all new buildings was for residential buildings. Permits for nonresidential buildings comprised 44.6 per cent of the total number and 33.8 per cent of the total estimated cost.

Of the 211,123 new buildings projected, 84,098 were one-family houses, this being 39.8 per cent of the total number of new buildings. As in previous years, more permits were issued for one-family dwellings than for any other class of building, either residential or nonresidential. Private garages were a close second, permits being issued for 74,824 of them, comprising 35.4 per cent of the total number of all new buildings; their estimated cost is, however, much smaller, being $40,293,106, as compared with $382,573,529.

The largest amount of money to be spent for any class of nonresidential buildings was for office buildings, the permits for which totaled $100,269,781.

As in previous years, the estimated cost of amusement buildings exceeds that of churches, being $21,813,015, as against $18,027,860, though the churches slightly outnumber the amusement buildings.

The estimated cost of residential buildings was nearly double the estimated cost of nonresidential buildings. The permits show $930,432,984 as the cost of the former and $474,557,571 of the latter.

TABLE 2.—NUMBER AND PER CENT OF FAMILIES TO BE HOUSED IN DWELLINGS FOR WHICH PERMITS WERE ISSUED IN 68 IDENTICAL CITIES, FIRST HALF OF 1923 AND OF 1924

Kind of dwelling	Number of buildings for which permits were issued		Families provided for			
			Number		Per cent	
	First half, 1923	First half, 1924	First half, 1923	First half, 1924	First half, 1923	First half, 1924
One-family dwellings	79,850	84,098	79,850	84,098	40.4	41.0
Two-family dwellings	18,323	23,964	36,646	47,928	18.5	23.4
One-family and two-family dwellings with stores combined	2,002	2,031	3,157	3,492	1.6	1.7
Multifamily apartments	5,436	6,286	73,266	66,052	37.0	32.2
Multifamily apartments with stores combined	452	379	4,900	3,623	2.5	1.8
Total	106,063	116,758	197,819	205,193	100.0	100.0

Table 2 shows the number and per cent of families provided for by each of the different kinds of dwellings for which permits were issued in 68 identical cities in the first half of 1923 and the first half of 1924.

The number of family accommodations provided by one-family dwellings increased from 79,850 in the first half of 1923 to 84,098 in the first half of 1924, an increase of 5.3 per cent. Considering accommodations provided by all kinds of dwellings there was only a slight increase in the per cent of families provided for in one-family dwellings in the first six months of 1924 as compared with the first six months of 1923. The number of families provided for in two-family dwellings increased from 36,646 in the first half of 1923 to 47,928 in the first half of 1924, an increase of 30.8 per cent. Two-family dwellings provided for 18.5 per cent of all families provided for in the first half of 1923, and 23.4 per cent in the first half of 1924. This shows a great increase in the popularity of the two-family dwelling. The investment feature of this class of dwelling evidently appeals to many people, such a house being not only less expensive per family to build than a one-family house, but also costing less to heat and keep in repair. In some cities, however, there are zoning restrictions against this class of dwellings as it is not so easy to follow pleasing lines of architecture in two-family dwellings as in single-family dwellings.

The percentage distribution of families provided for by one and two family dwellings with stores combined increased only one-tenth of 1 per cent. This class of structure is usually used by small tradesmen who find it a convenient and inexpensive way of combining a home with a place of business.

The most startling change shown by the table is in apartment houses. The bureau has been collecting data on building permits since 1920 and in each year up to 1924 there has been an increase in the proportion of families provided for in apartment houses. In the first six months of 1924, however, while the number of buildings increased, accommodations were provided for 8,491 fewer families in the two groups of apartment houses than in the same period of 1923. The average number of families per building decreased from 13.4 to 10.5. It is interesting to speculate on the reason for this. Undoubtedly part of this decrease is explained by the exodus of people

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to the suburbs. One city reports that October 1 of this year will see a greater number of families move than have moved any year since the war, and that most of them are moving from apartments to small homes of their own, having saved enough to make a first payment.

Permits were issued in the 68 cities of over 100,000 in the first half of 1923 for 106,063 dwellings, while in the first half of 1924 the number was 116,758, an increase of 10.1 per cent.

The total number of families provided for was 205,193 in the first half of 1924 as compared with 197,819 in the first half of 1923. This is an increase of only 7,374 families, or 3.7 per cent. The MONTHLY LABOR REVIEW for October, 1923, shows that for 65 of these cities (and the 3 not included were the least populous) in the first half of 1922, 147,249 families were provided for in new houses, while the same 65 cities in the first half of 1923 provided for 195,015 an increase of 47,766 or 32.4 per cent. The figures for 1924 seem to indicate that housing accommodations are catching up with the demand.

Table 3 shows the number and cost of each of the different kinds of buildings for 68 cities having a population of 100,000 and over in the first half of 1923 and the first half of 1924, and the per cent of increase or decrease in the number and in the cost.

TABLE 3.—NUMBER AND COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED IN 68 IDENTICAL CITIES, FIRST HALF OF 1923 AND OF 1924, BY KIND OF BUILDING

Kind of building	Buildings for which permits were issued in—				Per cent of increase (+) or decrease (—) in first half of 1924 as compared with first half of 1923	
	First half of 1923		First half of 1924			
	Number	Cost	Number	Cost	Number	Cost
Residential buildings						
One-family dwellings	79,850	$356,942,709	84,098	$382,573,529	+5.3	+7.2
Two-family dwellings	18,323	128,602,766	23,964	202,660,601	+30.8	+57.6
One and two family dwellings with stores combined	2,002	20,165,333	2,031	22,668,689	+1.4	+12.4
Multi-family dwellings	5,436	284,798,825	6,286	269,422,675	+15.6	−5.4
Multi-family dwellings with stores combined	452	24,658,617	379	19,269,316	−16.2	−21.9
Hotels	98	61,392,465	81	28,754,845	−17.4	−53.2
Lodging houses	2	16,000	8	136,300	+300.0	+751.9
Other	51	8,590,663	47	4,947,629	−7.9	−42.4
Total	106,214	885,167,378	116,894	930,432,984	+10.1	+5.0
Nonresidential buildings						
Amusement buildings	313	15,888,753	315	21,813,015	+.6	+37.3
Churches	293	15,524,677	332	18,027,860	+13.3	+16.1
Factories and workshops	1,885	63,534,026	1,853	81,236,483	−1.7	+27.9
Public garages	1,451	23,395,441	1,935	30,875,950	+33.4	+32.0
Private garages	70,182	36,318,214	74,824	40,203,106	+6.6	+10.9
Service stations	1,061	3,312,691	1,294	3,423,821	+22.0	+3.4
Institutions	71	9,466,539	76	12,355,072	+7.0	+30.5
Office buildings	606	84,653,868	560	100,269,781	−9.3	+18.4
Public buildings	49	4,396,212	53	12,322,158	+8.2	+180.3
Public works and utilities	135	9,493,407	123	11,885,946	−8.9	+25.2
Schools and libraries	316	60,970,471	328	67,462,556	+3.8	+10.6
Sheds	8,613	3,369,086	6,746	2,671,864	−21.7	−20.7
Stables and barns	208	485,209	123	360,905	−40.9	−25.6
Stores and warehouses	4,983	83,755,152	4,726	69,502,527	−5.2	−17.0
All other	444	3,260,831	951	2,056,527	+114.2	−36.9
Total	90,610	417,824,571	94,229	474,557,571	+4.0	+13.6
Grand total	196,824	1,302,991,949	211,123	1,404,990,555	+7.3	+7.8

It will be seen by Table 3 that the majority of the several classes of buildings show an increase in the first half of 1924 over the corresponding period of 1923 both in number and estimated cost. The changes in number range from a decrease of 40.9 per cent in stables and barns to 300 per cent increase in the number of lodging houses, and the estimated cost ranges from a decrease of 53.2 per cent in the case of hotels to an increase of 751.9 per cent in the case of the very few new lodging houses.

For some classes of buildings permits issued show decreases both in the number and in the estimated cost, notably apartment houses with stores combined, hotels, sheds, stables and barns, and stores and warehouses. Factory buildings, office buildings, and public utilities show a decrease in number, with an increase in cost.

The large general table following, pages 144 to 163, shows detailed information concerning building permits issued in each of the 68 cities having a population of 100,000 or over in the first half of 1923 and the first half of 1924.

Part 1 of the table gives the number and cost of each kind of dwelling, the number of families provided for by each type of house, and the ratio of families provided for to each 10,000 of population in each of the 68 cities.

In the majority of these cities more buildings were projected and more money was to be expended for residential purposes than for nonresidential purposes.

It will be noted that the ratio of families provided for is based both on the population according to the 1920 census and on the estimated population for the specified year. Although the 1920 population figures are the latest collected by census enumerators, the population stated for the specified year, while an estimate, is more nearly the population for the year shown. These estimates were made by the Census Bureau of the United States Department of Commerce. It will be noticed that for some cities no estimate of population was made.

The 68 cities from which reports were received had a population according to the 1920 census of 27,431,206. Assuming no change in the unestimated cities, the estimated population for 1923 was 29,094,506, and for 1924 it is 29,485,113.

In the first six months of 1923 these 68 cities provided for 197,819 families, or at the rate of 72.1 families for each 10,000 of population according to the 1920 census, or 68 families per 10,000 of population according to the population as estimated by the Census Bureau for 1923.

During the first six months of 1924 permits were issued in these 68 cities for dwelling houses to provide places of abode for 205,193 families, this being at the rate of 74.8 families to each 10,000 of population according to the 1920 census, and 69.6 families per 10,000 of population as estimated for 1924.

While New York provided for more families than any other city in the United States (66,380 in the first half of 1924), it did not approach Los Angeles in the number provided for according to population. This fast-growing Pacific-coast city provided for 302.3 families to each 10,000 of population in the first six months of the current year, according to the population as of the 1920 census, or for 261.4 to

each 10,000 inhabitants as of the population estimated for July 1, 1924. This city did not, however, supply living quarters for as many families during this period as during the corresponding period of 1923. During the first six months of that year 382.1 families were provided for to each 10,000 of population according to the 1920 census, or 330.4 families according to the estimated population for 1923.

In addition to Los Angeles 9 cities provided for more than 100 families to each 10,000 of population based on the 1920 census, in the first half of 1924. Following are the 10 cities which show a ratio of over 100 families to each 10,000 of population, according to the 1920 census, during the first six months of 1924. The estimated population for 1924 was not used as such estimate was not made for Detroit or Houston.

Los Angeles	302.3	Houston	120.2
Detroit	139.8	Hartford	106.9
Oakland	132.1	Portland, Oreg	106.6
Dallas	128.6	Birmingham	104.8
New York	126.2	Atlanta	101.5

In the first half of 1923 there were only 8 cities providing houses for over 100 families to each 10,000 of population, Hartford, Portland, and Birmingham reaching that pinnacle for the first time this year, and Kansas City, Mo., dropping from it.

Part 2 of the general table (p. 152) shows the number and cost of each of the different kinds of nonresidental buildings erected in the 68 cities. New York City shows the greatest expenditure in this field of construction as well as in the construction of residential buildings. In New York, for instance, the estimated cost of public buildings was almost twice that of all the rest of the cities having population of 100,000 and over, combined. Permits show that New York and Chicago were to spend about half the total expenditure made for factory buildings in the whole 68 cities. In office buildings also there was a large amount expended in these two cities.

Part 3 of the table (p. 160) shows the number and cost of repairs on old buildings, the number and cost of installations, the grand totals of number and cost of new buildings and repairs on old buildings; and the rank in cost of construction of each of the 68 cities. During the first six months of 1924 there were 94,895 permits issued for additions and repairs to old buildings at an estimated cost of $134,082,824, as compared with 92,963 permits with a cost of $135,822,167 during the same period in 1923.

In 36 of the 68 cities the building inspectors issue the permits for the installation of boilers, signs, elevators, etc. In these cities there were 32,283 permits issued for installations during the first half of 1924 compared with 29,950 in the like period of 1923. The stated cost of making these installations was $13,879,158 in 1924 and $11,985,707 in 1923.

The total number of permits issued for all classes of buildings, both new and old, in these 68 cities in the first half of 1924 reached a total of 338,301, and the estimated cost of these was $1,552,952,537. In the first half of 1923 there were 319,737 permits issued in these cities, indicating an expenditure of $1,450,799,823. This is an increase of 7 per cent in the estimated expenditure in the first half of 1924 as compared with the first half of 1923.

The 5 cities showing the greatest amount of expenditure for building purposes of all kinds according to permits issued during the first six months of 1924 and the amounts estimated to be spent in each of them are shown below:

New York	$548, 161, 458
Chicago	166, 436, 214
Detroit	87, 195, 800
Los Angeles	78, 828, 738
Philadelphia	72, 573, 485

These cities were also the leading five during the first half of 1923, but during that period Detroit was in fifth place with Los Angeles in third place and Philadelphia in fourth place.

TABLE 4.—NUMBER AND ESTIMATED COST OF BUILDINGS (NEW CONSTRUCTION, AND REPAIRS, ALTERATIONS, AND ADDITIONS TO OLD BUILDINGS) COVERED BY PERMITS ISSUED IN THE FIRST HALF OF 1923 AND OF 1924, BY INTENDED USE OF BUILDINGS

PART 1.—NEW RESIDENTIAL BUILDINGS

City and State	First half of each year	Housekeeping dwellings														
		One-family dwellings			Two-family dwellings			One-family and two-family dwellings with stores combined			Multifamily dwellings			Multifamily dwellings with stores combined		
		Number	Cost	Families	Number	Cost	Families	Number	Cost	Families	Number	Cost	Families	Number	Cost	Families
Akron, Ohio	1923	330	$1,525,765	330												
	1924	552	2,509,865	552							3	$54,100	16			
Albany, N. Y.	1923	85	737,300	85	58	$586,000	116	2	$27,000	4	6	125,000	24			
	1924	176	1,569,200	176	93	1,513,550	186	3	30,000	6	7	813,000	68			
Atlanta, Ga.	1923	1,129	4,415,388	1,129	130	586,850	260	16	98,100	27	76	2,036,725	711			
	1924	910	2,771,607	910	172	636,650	344	10	31,050	13	65	2,067,300	769			
Baltimore, Md.	1923	1,956	7,471,925	1,956	225	1,318,575	450	7	30,000	8	12	1,207,000	267			
	1924	2,490	9,054,625	2,490	363	2,249,875	726	27	146,500	35	8	600,000	150	1	$50,000	12
Birmingham, Ala.	1923	1,394	2,570,144	1,394	5	26,000	10	4	12,500	6	9	494,000	84	1	27,000	4
	1924	1,688	3,100,510	1,688	39	65,850	78	4	13,500	4	23	211,150	104			
Boston, Mass.	1923	116	[1] 6,640,980	116	150	(2)	300	2	(2)	2	109	(2)	1,564	4	(2)	107
	1924	124	[3] 10,806,025	124	265	(2)	530	1	(2)	2	235	(2)	2,082			
Bridgeport, Conn.	1923	32	153,070	32	8	70,300	16				9	75,200	27			
	1924	45	174,025	45	23	191,300	46				16	121,100	48			
Buffalo, N. Y.	1923	840	3,374,350	840	361	1,488,520	722	36	291,300	48	6	205,500	46	5	128,000	21
	1924	1,120	4,118,650	1,120	680	3,040,650	1,360	33	298,250	48	6	465,000	146	2	19,500	6
Cambridge, Mass.	1923	15	199,500	15	25	302,400	50				8	360,000	129			
	1924	18	235,600	18	38	614,750	76				13	688,000	128			
Camden, N. J.	1923	235	961,535	235				17	179,000	30						
	1924	200	945,625	200				5	54,000	9						
Chicago, Ill.	1923	3,474	18,780,890	3,474	1,688	17,226,650	3,376	207	2,730,200	313	586	44,291,100	8,138	89	9,390,000	1,320
	1924	4,554	25,417,635	4,554	1,983	20,943,750	3,966	126	1,771,550	164	928	53,605,500	10,475	60	6,141,000	1,015
Cincinnati, Ohio	1923	929	5,822,290	929	154	1,241,050	308	4	34,250	6	23	329,000	106	1	35,000	3
	1924	764	6,027,730	764	105	851,450	210	18	228,800	57	34	956,600	370			
Cleveland, Ohio	1923	1,270	[4] 10,330,450	1,270	539	(2)	1,078				88	5,642,500	1,196			
	1924	1,222	8,857,330	1,222	688	4,230,870	1,376				156	7,623,000	1,864			
Columbus, Ohio	1923	880	4,001,300	880	372	2,783,500	744	21	201,500	31	37	641,500	178			
	1924	739	3,392,300	739	143	1,185,300	286	10	106,200	16	21	1,280,000	224	2	59,000	11
Dallas, Tex.	1923	1,424	4,497,975	1,424	142	880,800	284				65	2,478,361	519			
	1924	1,452	4,866,945	1,452	138	774,925	276				48	2,632,400	316			
Dayton, Ohio	1923	530	2,432,218	530	73	568,169	146	4	30,000	5	9	372,500	52	5	84,700	24
	1924	276	1,364,000	276	68	460,180	136				11	83,425	42	9	47,700	28
Denver, Colo.	1923	1,288	4,325,000	1,288	104	700,000	208				15	1,027,000	300			
	1924	1,237	4,460,600	1,237	57	446,000	114				18	600,000	212			
Des Moines, Iowa	1923	710	2,707,615	710				1	4,500	1	7	228,000	95	4	50,500	14
	1924	576	2,038,572	576	9	49,400	18	7	16,250	7	9	194,000	60	2	35,000	10
Detroit, Mich.	1923	6,195	22,245,248	6,195	1,209	8,897,121	2,418				250	10,266,334	4,317	101	2,741,627	724
	1924	6,557	24,952,512	6,557	1,646	12,330,296	3,292				340	11,707,180	3,400	134	4,515,944	644

Des Moines, Iowa	1923	710	2,707,615	710				1	4,500	1	7	228,000	95	4	50,500	14
	1924	576	2,038,572	576	9	49,400	18	7	16,250	7	9	194,000	60	2	35,000	10
Detroit, Mich	1923	6,195	22,245,248	6,195	1,209	8,897,121	2,418				250	10,266,334	4,317	101	2,741,627	724
	1924	6,557	24,952,512	6,557	1,646	12,330,296	3,292				340	11,707,180	3,400	134	4,515,944	644
Fall River, Mass	1923	98	476,567	98	24	180,870	48	5	42,000	7	43	438,040	129			
	1924	84	308,775	84	26	166,200	52	1	8,950	1	20	212,200	60			
Fort Worth, Tex	1923	978	3,157,225	978	4	18,910	8	1	5,500	1	10	159,600	40	2	45,225	7
	1924	602	1,889,271	602	3	25,000	6	1	2,500	1	4	61,100	28			
Grand Rapids, Mich	1923	659	2,661,750	659												
	1924	478	1,837,450	478	16	107,800	32	4	30,000	8						
Hartford, Conn	1923	46	370,050	46	42	409,236	84				71	1,283,498	356			
	1924	69	561,000	69	121	1,241,900	242				136	2,967,000	1,097	4	210,000	68
Houston, Tex	1923	1,373	3,786,501	1,373	36	235,435	72	10	29,482	17	31	459,683	169	10	73,700	39
	1924	1,315	3,979,305	1,315	64	392,940	128	8	33,700	12	46	533,900	198	3	26,500	9
Indianapolis, Ind	1923	1,219	5,364,793	1,219	265	1,720,378	530	3	39,425	4	10	364,850	159	4	121,000	21
	1924	936	3,571,620	936	323	1,570,233	646				15	601,000	197	1	70,000	40
Jersey City, N. J	1923	28	270,250	28	178	1,768,800	356	26	345,000	43	31	2,463,000	597	2	292,000	85
	1924	15	108,800	15	165	1,645,850	330	13	162,585	26	55	3,474,000	917	2	230,000	43
Kansas City, Kans	1923	437	1,017,700	437	2	5,800	4	5	9,900	8				1	12,000	4
	1924	460	1,098,940	460												
Kansas City, Mo	1923	1,558	5,099,750	1,558	56	431,500	112	8	44,500	16	212	3,767,100	2,544	8	133,000	96
	1924	1,295	4,268,350	1,295	30	227,500	60	1	3,500	1	78	1,960,500	1,094	3	23,000	12
Los Angeles, Calif	1923	9,522	25,405,680	9,522	2,388	11,243,738	4,776				750	18,412,955	7,738			
	1924	7,958	21,112,184	7,958	2,131	9,975,338	4,262				514	12,264,853	5,211			
Louisville, Ky	1923	1,218	2,016,450	1,218	30	150,000	60	45	142,000	62	10	200,000	40			
	1924	1,090	2,373,500	1,090	36	180,000	72				12	461,000	154			
Lowell, Mass	1923	92	369,100	92	41	234,300	82	2	12,500	3	4	58,500	33	2	60,000	26
	1924	105	385,300	105	42	296,000	84	2	9,000	2	5	47,500	22	2	17,500	8
Memphis, Tenn	1923	828	3,563,125	828	53	376,250	106	9	52,875	10	35	1,743,750	254	5	67,500	20
	1924	743	3,070,210	743	139	653,110	278	9	51,350	11	42	795,600	298	4	72,800	40
Milwaukee, Wis	1923	653	3,298,250	653	336	2,728,200	672	28	401,500	40	14	1,065,000	262			
	1924	645	3,925,380	645	394	3,610,800	788	24	336,500	31	12	1,039,500	327	4	122,000	17
Minneapolis, Minn	1923	1,604	5,566,705	1,604	113	972,200	226	7	23,700	7	60	2,195,500	724	8	410,000	165
	1924	1,427	4,873,010	1,427	97	822,900	194	3	5,100	3	45	1,100,400	382	3	228,500	75
Nashville, Tenn	1923	335	837,340	335				3	23,000	6	11	261,000	52			
	1924	360	634,990	360	4	6,800	8				2	47,000	16			
Newark, N. J	1923	145	1,013,495	145	367	4,355,200	734	22	520,500	37	97	2,816,800	693	25	1,411,700	279
	1924	149	1,126,715	149	406	5,094,200	812				84	4,524,500	862			
New Bedford, Mass	1923	104	416,000	104	178	1,424,000	356	3	30,000	3	17	170,000	76	2	40,000	16
	1924	68	433,000	68	95	907,500	190				25	303,000	103			
New Haven, Conn	1923	55	452,700	55	59	586,400	118				8	282,000	60			
	1924	59	506,286	59	65	545,800	130				26	1,318,000	317			
New Orleans, La	1923	386	1,246,486	386	498	2,148,104	996	151	794,115	250	21	167,100	63	18	102,310	54
	1924	490	1,294,000	490	320	1,402,350	640	95	950,225	180	35	310,500	105	12	100,500	38
New York, N. Y.: Brooklyn	1923	4,146	21,880,580	4,146	2,513	24,006,750	5,026	504	5,919,000	1,008	1,177	58,364,300	13,960			
	1924	5,922	32,451,825	5,922	4,061	41,396,750	8,122	598	7,491,500	1,188	1,476	35,286,750	9,217	50	2,987,500	603

[1] Includes cost of two-family dwellings, one and two family dwellings with stores combined, multifamily dwellings, and dwellings with stores combined.
[2] Included with one-family dwellings.
[3] Includes cost of two-family dwellings, one and two family dwellings with stores combined, and multifamily dwellings
[4] Includes cost of two-family dwellings.

TABLE 4.—NUMBER AND ESTIMATED COST OF BUILDINGS (NEW CONSTRUCTION, AND REPAIRS, ALTERATIONS, AND ADDITIONS TO OLD BUILDINGS) COVERED BY PERMITS ISSUED IN THE FIRST HALF OF 1923 AND OF 1924, BY INTENDED USE OF BUILDINGS—Contd.

PART 1.—NEW RESIDENTIAL BUILDINGS—Continued

City and State	First half of each year	Housekeeping dwellings														
		One-family dwellings			Two-family dwellings			One-family and two-family dwellings with stores combined			Multifamily dwellings			Multifamily dwellings with stores combined		
		Number	Cost	Families	Number	Cost	Families	Number	Cost	Families	Number	Cost	Families	Number	Cost	Families
New York, N. Y.—Con.																
Bronx	1923	1,383	[4]$21,459,200	1,383	1,074	(3)	2,148				292	$46,663,000	11,976			
	1924	1,315	8,296,870	1,315	2,134	$26,552,950	4,268	26	$368,000	48	343	33,557,500	8,611	8	$580,000	120
Manhattan	1923	5	177,000	5	9	86,000	18	6	98,000	12	106	27,293,500	4,972	14	5,950,000	961
	1924	3	137,000	3	48	866,000	96				126	45,805,100	6,130			
Queens	1923	6,811	35,885,985	6,811	2,403	19,745,100	4,806	356	4,209,550	561	249	15,127,500	2,638	28	833,000	172
	1924	7,330	41,848,830	7,330	3,916	33,873,500	7,832	575	6,476,960	975	338	7,963,200	2,396	27	861,000	186
Richmond	1923	1,060	3,992,419	1,060	311	1,841,700	622	33	272,890	39						
	1924	1,277	5,128,260	1,277	280	1,918,800	560	44	356,400	62	4	537,000	119			
Norfolk, Va	1923	348	1,542,385	348	32	172,450	64	8	32,300	8	2	19,000	12	22	367,900	161
	1924	277	1,031,125	277	14	69,300	28	3	14,200	3	30	735,690	348			
Oakland, Calif	1923	2,071	6,492,421	2,071	17	88,344	34	20	97,250	20	109	1,469,374	439	18	221,300	77
	1924	2,003	6,410,685	2,003	92	594,140	184	29	159,345	35	123	1,998,759	596	9	144,328	38
Omaha, Nebr	1923	884	3,827,406	884	51	537,000	102							8	233,000	50
	1924	824	3,417,185	824	26	222,200	52				7	285,000	100			
Paterson, N. J	1923	110	611,230	110	145	1,022,455	290	6	23,500	9	8	294,000	90	3	37,000	12
	1924	117	613,800	117	123	908,392	246	1	10,000	1	12	240,000	90	1	21,000	5
Philadelphia, Pa	1923	5,028	28,248,900	5,028	38	323,500	76	212	1,544,030	222	62	3,436,840	628			
	1924	5,667	32,037,800	5,667	30	221,580	60	199	1,780,680	222	32	4,495,500	712			
Pittsburgh, Pa	1923	857	5,723,343	857	183	1,982,000	366	27	280,200	41	20	549,800	162	6	431,000	122
	1924	1,006	7,202,841	1,006	87	971,603	174	5	57,080	9	13	822,032	143			
Portland, Oreg	1923	1,557	5,650,370	1,557	63	336,500	126				18	980,500	378			
	1924	2,388	8,892,360	2,388							35	1,027,000	349			
Providence, R. I	1923	108	1,258,400	108	219	2,537,600	438	2	22,200	4	70	1,009,200	271			
	1924	137	1,700,300	137	178	2,112,200	356				42	627,000	141			
Reading, Pa	1923	282	762,100	282				2	9,000	2	7	76,000	31	1	22,000	4
	1924	227	1,133,000	227				2	13,500	2				2	111,500	35
Richmond, Va	1923	519	3,325,300	519	40	255,080	80	29	185,216	29	24	956,000	240			
	1924	773	5,205,996	773	139	279,892	278	18	111,956	32	20	1,117,500	300			
Rochester, N. Y	1923	666	3,982,900	666	145	1,389,400	290	15	237,500	24	3	75,000	29	10	220,500	51
	1924	868	5,244,660	868	196	1,891,250	392	21	287,100	34	15	963,500	281	11	352,500	60
St. Louis, Mo	1923	884	3,375,035	884	265	1,568,750	530	21	181,300	28	246	4,113,700	1,287	4	62,000	15
	1924	997	3,515,240	997	362	2,003,600	724				32	2,255,000	1,047			
St. Paul, Minn	1923	1,018	4,819,026	1,018	42	459,156	84				25	1,033,840	262	15	388,880	80
	1924	785	4,098,975	785	40	395,628	80	3	338,840	58	12	414,780	118			

St. Paul, Minn	1923	1,018	4,819,026	1,018	42	459,156	84				25	1,033,840	262	15	388,880	80
	1924	785	4,098,975	785	40	395,628	80	3	338,840	58	12	414,780	118			
Salt Lake City, Utah	1923	632	1,500,100	632	3	13,000	6	1	5,000	2	4	346,000	221			
	1924	518	1,786,075	518	15	42,000	30				4	49,500	60			
San Antonio, Tex	1923	889	2,275,710	889	18	219,000	36	1	12,000	2	3	35,500	12			
	1924	845	2,361,330	845	2	10,000	4				5	41,400	17			
San Francisco, Calif	1923	1,381	4,742,524	1,381	359	2,678,035	718	27	262,595	36	109	6,483,530	1,577	11	124,875	45
	1924	1,814	7,745,009	1,814	289	2,165,375	578	14	97,500	28	284	5,772,856	1,284	6	94,850	36
Scranton, Pa	1923	90	385,450	90	16	122,300	32	11	32,549	14	10	56,050	38			
	1924	190	944,200	190	35	242,800	70	6	30,000	8	4	40,000	14			
Seattle, Wash	1923	1,166	3,547,825	1,166							39	2,624,000	656			
	1924	1,500	4,775,395	1,500	22	181,280	44				37	2,456,500	614			
Spokane, Wash	1923	212	628,110	212				1	3,000	1						
	1924	200	520,383	200	88	400,000	176	1	1,800	1						
Springfield, Mass	1923	190	649,050	190	193	1,157,900	386				20	537,000	157	2	55,000	20
	1924	269	978,800	269	292	1,919,100	584	5	82,500	14	31	1,905,500	172			
Syracuse, N. Y	1923	215	645,000	215	82	574,000	164	5	42,000	6	1	8,000	3			
	1924	237	1,281,310	237	141	1,199,500	282	6	69,500	9	15	164,000	54	1	40,000	12
Toledo, Ohio	1923	618	2,292,120	618	60	572,790	120	21	164,800	25	2	510,000	24			
	1924	742	3,129,240	742	68	530,000	136	27	345,900	71	5	98,000	26			
Trenton, N. J	1923	353	1,424,136	353	8	32,000	16	12	108,356	13	1	4,000	4			
	1924	460	1,844,930	460				15	93,718	22	2	20,500	10	4	59,994	20
Washington, D. C	1923	1,265	11,089,800	1,265				3	32,000	4	38	5,800,000	1,181			
	1924	1,133	7,749,413	1,133	126	1,367,544	252	2	8,000	2	35	2,022,500	505	3	1,768,000	376
Wilmington, Del	1923	139	680,074	139				8	43,750	15						
	1924	160	987,050	160				13	68,000	13	1	124,000	28			
Worcester, Mass	1923	236	962,500	236	79	822,500	158	8	75,300	13	24	367,100	92	5	168,900	27
	1924	288	1,305,225	228	105	1,170,300	210				69	1,283,800	276	3	100,700	11
Yonkers, N. Y	1923	160	1,533,000	160	25	283,400	50	3	28,000	4	14	994,000	175	3	213,000	48
	1924	225	2,109,450	225	44	465,700	88	8	81,000	10	22	1,361,000	354	3	76,000	14
Youngstown, Ohio	1923	397	1,990,450	397	17	110,800	34	11	89,700	20	3	84,000	9	5	105,000	26
	1924	553	2,667,525	553	24	231,600	48	5	36,000	8	15	228,500	78	3	103,000	31
Total	1923	79,850	[3] 356,942,709	79,850	18,323	[3] 128,602,766	36,646	2,002	[3] 20,165,333	3,157	5,436	[3] 284,798,825	73,266	452	[3] 24,658,617	4,900
	1924	84,098	[3] 382,573,529	84,098	23,964	[3] 202,660,001	47,928	2,031	[3] 22,668,689	3,492	6,286	[3] 269,422,675	66,052	379	[3] 19,269,316	3,623

[1] Included with one-family dwellings.

[2] Includes cost of two-family dwellings.

[3] See notes to details.

TABLE 4.—NUMBER AND ESTIMATED COST OF BUILDINGS (NEW CONSTRUCTION, AND REPAIRS, ALTERATIONS, AND ADDITIONS TO OLD BUILDINGS) COVERED BY PERMITS ISSUED IN THE FIRST HALF OF 1923 AND OF 1924, BY INTENDED USE OF BUILDINGS—Contd.

PART 1.—NEW RESIDENTIAL BUILDINGS—Continued.

City and State	First half of each year	Total families provided for	Population of city		Ratio of families provided for to each 10,000 of population based on—		Nonhousekeeping dwellings						Total new residential dwellings	
							Hotels		Lodging houses		Others			
			Census of 1920	Census estimate for year specified	Census of 1920	Census estimate for year specified	Number	Cost	Number	Cost	Number	Cost	Number	Cost
Akron, Ohio	1923	330	208,435	(6)	15.8								330	$1,525,765
	1924	568		(6)	27.3								555	2,563,965
Albany, N. Y	1923	229	113,344	117,375	20.2	19.5							151	1,475,300
	1924	436		118,527	38.5	36.8							279	3,925,750
Atlanta, Ga	1923	2,127	200,616	222,963	106.0	95.4	2	$2,400,000					1,353	9,537,063
	1924	2,036		227,710	101.5	89.4							1,157	5,506,607
Baltimore, Md	1923	2,681	733,826	773,580	36.5	34.7					1	$40,000	2,201	10,067,500
	1924	3,413		784,938	46.5	43.5					1	50,000	2,890	12,151,000
Birmingham, Ala	1923	1,498	178,806	195,901	83.8	76.5							1,413	3,129,644
	1924	1,874		200,785	104.8	93.3	1	40,150					1,755	3,431,160
Boston, Mass	1923	2,089	748,060	770,400	27.9	27.1	3	1,663,000					384	8,303,980
	1924	2,738		776,783	36.6	35.2			2	$76,000			627	10,882,025
Bridgeport, Conn	1923	75	143,535	(6)	5.2								49	298,570
	1924	139		(6)	9.7								84	486,425
Buffalo, N. Y	1923	1,677	506,775	536,718	33.1	31.2							1,248	5,487,670
	1924	2,680		545,273	52.9	49.1					1	35,000	1,842	7,977,050
Cambridge, Mass	1923	194	109,694	111,444	17.7	17.4							48	861,900
	1924	222		111,944	20.2	19.8							69	1,538,350
Camden, N. J	1923	265	116,309	124,157	22.8	21.3							252	1,140,535
	1924	209		126,399	18.0	16.5					1	70,000	206	1,069,625
Chicago, Ill	1923	16,621	2,701,705	2,886,121	61.5	57.6	23	30,796,000	1	15,000	2	500,000	6,070	123,729,840
	1924	20,174		2,939,605	74.7	68.6	7	1,860,000			2	685,000	7,660	110,424,435
Cincinnati, Ohio	1923	1,352	401,247	406,312	33.7	33.3					3	455,000	1,114	7,916,590
	1924	1,401		407,835	34.9	34.4	1	650,000					922	8,714,580
Cleveland, Ohio	1923	3,544	796,841	888,519	44.5	39.9	1	650,000					1,898	16,022,950
	1924	4,462		912,502	56.0	48.9							2,066	20,711,200
Columbus, Ohio	1923	1,833	237,031	261,082	77.3	70.2					1	42,000	1,311	7,669,800
	1924	1,276		266,709	53.8	47.8							915	6,022,800
Dallas, Tex	1923	2,227	158,976	177,274	140.1	125.6							1,631	7,857,136
	1924	2,044		187,862	128.6	108.8							1,638	8,274,270
Dayton, Ohio	1923	757	152,559	165,530	49.6	45.7							621	3,487,587
	1924	482		169,236	31.6	28.5							364	1,955,305
Des Moines, Iowa	1924	1,583		(6)	60.8								1,312	8,506,600
	1923	820	126,468	140,923	64.8	58.2							722	2,990,615
	1924	671		145,053	53.1	46.3							603	2,333,222
Detroit, Mich	1923	13,654	993,678	(6)	137.4		8	1,028,400			1	139,800	7,764	45,318,530
	1924	13,893		(6)	139.8		7	3,200,500			2	343,300	8,686	57,049,732

Des Moines, Iowa	1924	1,563		(1)	60.9								1,312	5,535,600
	1923	820	126,468	140,923	64.8	58.2							722	2,990,615
	1924	671		145,053	53.1	46.3							603	2,333,222
Detroit, Mich	1923	13,654	993,678	(1)	137.4		8	1,028,400			1	139,800	7,764	45,318,530
	1924	13,893		(1)	139.8		7	3,200,500			2	343,300	8,686	57,049,732
Fall River, Mass	1923	282	120,485	120,912	23.4	23.3							170	1,137,477
	1924	197		121,034	16.4	16.3							131	695,825
Fort Worth, Tex	1923	1,034	106,482	143,821	97.1	71.9							995	3,386,460
	1924	637		148,107	59.8	43.0							610	1,977,871
Grand Rapids, Mich	1923	659	137,634	145,947	47.9	45.2							659	2,661,750
	1924	518		148,322	37.6	34.9							498	1,975,250
Hartford, Conn	1923	486	138,036	(1)	35.2								159	2,062,779
	1924	1,476		156,167	106.9	94.5							330	4,979,900
Houston, Texas	1923	1,670	138,276	154,970	120.8	107.8							1,460	4,584,801
	1924	1,662		(1)	120.2						2	563,679	1,438	5,530,024
Indianapolis, Ind	1923	1,933	314,194	342,718	61.5	56.4	1	225,000			2	690,900	1,504	8,526,346
	1924	1,819		350,425	57.9	51.9	1	250,000					1,276	6,062,853
Jersey City, N. J	1923	1,109	298,103	309,034	37.2	35.9							265	5,139,050
	1924	1,331		312,157	44.6	42.6							250	5,621,235
Kansas City, Kans	1923	453	101,177	115,781	44.8	39.1							445	1,045,400
	1924	460		117,762	45.5	39.1							460	1,098,940
Kansas City, Mo	1923	4,326	324,410	351,819	133.3	123.0	3	524,000			1	400,000	1,846	10,399,850
	1924	2,462		359,650	75.9	68.5			1	10,000			1,408	6,492,850
Los Angeles, Calif	1923	22,036	576,673	666,853	382.1	330.4	33	2,943,000					12,693	58,005,373
	1924	17,431		(1)	302.3	261.4	41	3,933,295					10,644	47,285,670
Louisville, Ky	1923	1,380	234,891	257,671	58.8	53.6	1	1,750,000			1	250,000	1,305	4,508,450
	1924	1,316		258,465	56.0	50.9	1	1,400,000					1,139	4,414,500
Lowell, Mass	1923	236	112,759	115,089	20.9	20.5					1	50,000	142	784,400
	1924	221		115,755	19.6	19.1							156	755,300
Memphis, Tenn	1923	1,218	162,351	170,067	75.0	71.6							930	5,803,500
	1924	1,370		172,276	84.4	79.5	2	1,017,900					939	5,660,970
Milwaukee, Wis	1923	1,627	457,147	484,595	35.6	33.6	1	525,000			4	588,000	1,036	8,605,950
	1924	1,808		492,087	39.5	36.7	1	500,000			1	85,000	1,081	9,619,180
Minneapolis, Minn	1923	2,726	380,582	409,125	71.6	66.6					1	50,000	1,793	9,218,105
	1924	2,081		417,280	54.7	49.9	2	87,000			1	8,000	1,578	7,124,910
Nashville, Tenn	1923	393	118,342	121,128	33.2	32.4					7	870,000	356	1,991,340
	1924	384		123,424	32.4	31.1	2	1,400,000			1	150,000	369	2,238,790
Newark, N. J	1923	1,888	414,524	438,699	45.5	43.0	1	35,000					657	10,152,695
	1924	1,823		445,606	44.0	40.9							639	10,745,415
New Bedford, Mass	1923	555	121,217	130,072	45.8	42.7							304	2,080,000
	1924	361		132,602	29.8	27.2							188	1,643,500
New Haven, Conn	1923	233	162,537	172,967	14.3	13.5							122	1,321,100
	1924	506		175,947	31.1	28.8							150	2,370,086
New Orleans, La	1923	1,749	387,219	404,575	45.2	43.2	1	168,500					1,075	4,626,615
	1924	1,453		409,534	37.5	35.5							952	4,057,575

[1] Not estimated.

TABLE 4.—NUMBER AND ESTIMATED COST OF BUILDINGS (NEW CONSTRUCTION, AND REPAIRS, ALTERATIONS, AND ADDITIONS TO OLD BUILDINGS) COVERED BY PERMITS ISSUED IN THE FIRST HALF OF 1923 AND OF 1924, BY INTENDED USE OF BUILDINGS—Contd.

PART 1.—NEW RESIDENTIAL BUILDINGS—Concluded.

City and State	First half of each year	Total families provided for	Population of city		Ratio of families provided for to each 10,000 of population based on—		Nonhousekeeping dwellings						Total new residential dwellings	
			Census of 1920	Census estimate for year specified	Census of 1920	Census estimate for year specified	Hotels		Lodging houses		Others			
							Number	Cost	Number	Cost	Number	Cost	Number	Cost
New York, N. Y.:														
Brooklyn	1923	24,140	5,620,048	5,927,625	110.9	105.1	2	$1,810,000					8,342	$111,980,630
	1924	25,052		6,015,504	126.2	110.3							12,107	119,614,325
Bronx	1923	15,507											2,749	68,122,200
	1924	14,362											3,826	69,355,320
Manhattan	1923	5,968					2	1,740,000			8	$1,274,000	150	36,618,500
	1924	6,229					5	12,200,000			5	1,545,000	187	60,553,100
Queens	1923	14,988											9,847	75,801,135
	1924	18,719							1	$6,000	8	358,800	12,195	91,388,290
Richmond	1923	1,721											1,404	6,107,009
	1924	2,018											1,605	7,940,460
Norfolk, Va	1923	593	115,777	159,089	51.2	37.3	1	65,000					413	2,199,035
	1924	656		164,105	56.7	40.0							324	1,850,315
Oakland, Calif	1923	2,641	216,261	240,086	122.1	110.0							2,235	8,368,689
	1924	2,856		246,893	132.1	115.7	1	23,000					2,257	9,330,257
Omaha, Nebr	1923	1,036	191,601	204,382	54.1	50.7	1	6,000			3	887,000	947	5,490,406
	1924	976		208,025	50.9	46.9							857	3,924,385
Paterson, N. J	1923	511	135,875	139,579	37.6	36.6							272	1,988,185
	1924	459		140,637	33.8	32.6	1	700,000			2	32,000	257	2,525,192
Philadelphia, Pa	1923	5,954	1,823,779	1,922,788	32.6	31.0	4	4,868,565			1	600,000	5,345	39,021,835
	1924	6,661		1,951,076	36.5	34.1							5,928	38,535,560
Pittsburgh, Pa	1923	1,548	588,343	613,442	26.3	25.2					2	35,000	1,095	9,001,343
	1924	1,332		625,915	22.6	21.3	1	23,000	2	3,300	4	23,000	1,118	9,102,856
Portland, Oreg	1923	2,061	258,288	273,621	79.8	75.3	1	200,000			2	79,000	1,641	7,246,370
	1924	2,737		278,002	106.0	98.5	1	250,000					2,424	10,169,360
Providence, R. I	1923	821	237,595	242,378	34.6	33.9							399	4,827,400
	1924	634		243,745	26.7	26.0							357	4,439,500
Reading, Pa	1923	319	107,784	110,917	29.6	28.8							292	869,100
	1924	264		111,812	24.5	23.6							231	1,258,000
Richmond, Va	1923	868	171,567	181,044	50.6	47.9							612	4,721,596
	1924	1,383		183,723	80.6	75.3							950	6,715,344
Rochester, N. Y	1923	1,060	295,750	317,867	35.8	33.3							839	5,905,300
	1924	1,563		325,211	56.3	50.3							1,111	8,739,010
St. Louis, Mo	1923	2,744	772,897	803,853	35.5	34.1	5	1,310,000			2	725,000	1,427	11,335,785
	1924	2,768		812,698	35.8	34.1	2	800,000			2	197,000	1,395	8,770,840

Rochester, N. Y.	1923	1,060	295,750	317,867	35.8	33.3								950	6,715,344
	1924	1,063		325,211	36.3	30.3								839	5,905,300
														1,111	8,739,010
St. Louis, Mo.	1923	2,744	772,897	803,853	35.5	34.1	5	1,310,000			2	725,000	1,427	11,335,785
	1924	2,768		812,698	35.8	34.1	2	800,000			2	197,000	1,395	8,770,840
St. Paul, Minn.	1923	1,444	234,698	241,891	61.5	59.7			1	1,000			1,101	6,701,902
	1924	1,041		243,946	44.4	42.7					1	194,400	841	5,442,623
Salt Lake City, Utah	1923	861	118,110	126,241	72.9	68.2					1	50,000	641	1,914,100
	1924	608		128,564	51.5	47.3							537	1,877,575
San Antonio, Tex.	1923	939	161,379	184,727	58.2	50.8							911	2,542,210
	1924	866		191,398	53.7	45.2					2	360,060	854	2,772,730
San Francisco, Calif.	1923	3,757	508,676	539,038	73.9	69.7	2	185,000			4	378,100	1,893	14,854,659
	1924	3,740		548,284	73.5	68.2	3	340,000			7	68,950	2,417	16,284,540
Scranton, Pa.	1923	174	137,783	140,636	12.6	12.4							127	596,349
	1924	282		141,451	20.5	19.9							235	1,257,000
Seattle, Wash.	1923	1,822	315,312	(6)	57.8		1	3,500,000					1,206	9,671,825
	1924	2,158		(6)	68.4		1	80,000					1,560	7,493,175
Spokane, Wash.	1923	213	104,437	104,573	20.4	20.4							213	631,110
	1924	377		(6)	36.1								289	922,183
Springfield, Mass.	1923	753	129,614	144,227	58.1	52.2							405	2,398,950
	1924	1,039		148,402	80.2	70.0							597	4,885,900
Syracuse, N. Y.	1923	388	171,717	184,511	22.6	21.0					1	50,000	304	1,319,000
	1924	594		188,060	34.6	31.6							400	2,754,310
Toledo, Ohio	1923	787	243,164	268,338	32.4	29.3							701	3,539,710
	1924	975		276,359	40.1	35.3			2	41,000			844	4,144,140
Trenton, N. J.	1923	386	119,289	127,390	32.4	30.3							374	1,568,492
	1924	512		129,705	42.9	39.5							481	2,019,142
Washington, D. C.	1923	2,450	437,571	(6)	56.0		1	5,000,000					1,307	21,921,800
	1924	2,268		486,936	51.8	46.6					1	30,000	1,300	12,945,457
Wilmington, Del.	1923	154	110,168	117,728	14.0	13.1					1	372,863	148	1,096,687
	1924	201		119,888	18.2	16.8							174	1,179,050
Worcester, Mass.	1923	526	179,754	191,927	29.3	27.4					1	64,000	353	2,460,300
	1924	785		195,405	43.7	40.2					2	108,500	467	3,968,525
Yonkers, N. Y.	1923	437	100,176	107,520	43.6	40.6							205	3,051,400
	1924	691		109,618	69.0	63.0					1	40,000	303	4,133,150
Youngstown, Ohio	1923	486	132,358	(6)	36.7								433	2,379,950
	1924	718		155,153	54.2	46.3							600	3,266,625
Total	1923	197,819	27,431,206	[7] 29,094,506	72.1	68.0	98	61,392,465	2	16,000	51	8,590,663	106,214	885,167,378
	1924	205,193		[7] 29,485,113	74.8	69.6	81	28,754,845	8	136,300	47	4,947,629	116,894	930,432,984

[6] Not estimated.
[7] See notes to details.

TABLE 4.—NUMBER AND ESTIMATED COST OF BUILDINGS (NEW CONSTRUCTION, AND REPAIRS, ALTERATIONS, AND ADDITIONS TO OLD BUILDINGS) COVERED BY PERMITS ISSUED IN THE FIRST HALF OF 1923 AND OF 1924, BY INTENDED USE OF BUILDINGS—Contd.

PART 2.—NEW NONRESIDENTIAL BUILDINGS.

City and State	First half of each year	Amusement and recreation places		Churches		Factories, shops, etc.		Garages (public)		Garages (private)		Gasoline and service stations		Institutions		Office buildings	
		Number	Cost	Number	Cost	Number	Cost	Number	Cost	Number	Cost	Number	Cost	Number	Cost	Number	Cost
Akron, Ohio	1923	6	$179,500	3	$110,300	26	$87,700	------	----------	922	$177,541	21	$48,966	------	----------	------	----------
	1924	1	300	6	126,500	13	73,650	------	----------	981	289,506	16	23,173	------	----------	34	$152,080
Albany, N. Y.	1923	------	----------	1	8,000	8	175,500	10	$172,600	119	102,115	18	5,000	------	----------	1	1,000,000
	1924	------	----------	2	80,000	1	3,200	33	244,500	223	182,675	21	20,700	------	----------	1	9,000
Atlanta, Ga.	1923	------	----------	8	231,250	4	49,500	------	----------	213	32,947	34	189,450	------	----------	10	2,411,000
	1924	------	----------	10	53,400	8	131,500	41	157,596	169	16,597	------	----------	------	----------	------	----------
Baltimore, Md.	1923	4	189,000	7	345,000	24	760,875	91	366,000	1,623	775,400	10	100,000	------	----------	9	914,000
	1924	6	212,750	9	365,000	41	1,593,000	152	680,000	1,859	2,034,600	9	36,500	3	$800,000	12	526,000
Birmingham, Ala.	1923	4	167,700	4	81,000	13	160,012	9	128,180	151	26,160	3	9,300	1	44,650	3	11,700
	1924	3	412,550	16	545,500	15	58,425	10	62,800	143	27,575	9	34,100	1	5,000	6	16,500
Boston, Mass.	1923	1	120,000	7	651,060	14	820,000	(1)	(1)	[2] 648	[2] 1,042,334	------	----------	5	450,000	15	2,530,300
	1924	5	245,000	2	70,000	16	1,288,340	(1)	(1)	[2] 831	[2] 1,929,171	------	----------	2	200,000	24	4,226,075
Bridgeport, Conn.	1923	------	----------	2	150,000	4	378,400	------	----------	208	79,606	6	43,000	------	----------	1	2,000
	1924	------	----------	3	114,000	------	----------	------	----------	323	209,216	------	----------	------	----------	1	35,000
Buffalo, N. Y.	1923	3	300,000	5	421,500	39	610,600	26	337,600	1,982	620,535	10	21,100	1	40,000	19	1,177,800
	1924	1	29,000	5	405,000	27	993,300	13	338,200	2,561	768,214	11	43,300	------	----------	7	126,300
Cambridge, Mass.	1923	1	1,000	------	----------	4	21,600	------	----------	144	198,079	3	7,200	------	----------	3	245,000
	1924	------	----------	1	40,000	10	379,920	3	48,700	117	133,815	3	8,300	------	----------	1	19,000
Camden, N. J.	1923	1	6,450	------	----------	17	1,420,350	1	7,500	193	86,345	4	70,000	------	----------	5	715,050
	1924	1	75,000	1	45,000	21	364,100	6	25,800	187	94,285	7	18,900	1	98,800	3	8,500
Chicago, Ill.	1923	12	1,507,700	21	1,390,100	166	8,701,350	55	1,573,500	4,534	2,178,500	70	331,150	4	670,000	97	16,428,300
	1924	12	2,876,000	14	1,495,000	147	12,880,200	63	2,052,000	5,909	3,499,500	83	547,275	4	3,045,000	21	8,645,000
Cincinnati, Ohio	1923	5	300,705	8	491,000	13	428,200	20	425,400	1,023	408,445	18	59,925	1	150,000	3	1,700,000
	1924	3	200,000	3	200,000	2	28,000	21	278,200	866	480,115	9	29,100	1	7,500	3	33,500
Cleveland, Ohio	1923	2	60,000	------	----------	43	1,848,850	------	----------	3,302	1,193,375	------	----------	------	----------	8	1,050,500
	1924	13	773,000	------	----------	31	688,500	------	----------	3,329	979,275	------	----------	------	----------	12	1,331,400
Columbus, Ohio	1923	------	----------	5	268,000	22	296,700	------	----------	1,437	509,250	21	43,575	1	29,000	3	69,500
	1924	2	27,500	1	9,500	16	268,275	6	99,000	1,274	428,420	29	58,400	------	----------	2	652,000
Dallas, Tex.	1923	4	115,800	9	23,000	7	82,250	9	53,825	86	35,549	24	90,250	1	500,000	------	----------
	1924	5	337,000	6	332,600	7	1,042,200	14	151,250	68	30,843	17	76,870	1	5,000	------	----------
Dayton, Ohio	1923	1	1,500	3	208,000	12	843,300	16	108,335	786	414,862	5	29,430	------	----------	3	71,350
	1924	1	5,000	2	242,000	31	1,216,300	8	34,108	650	427,257	24	100,000	1	375,000	1	357,500
Denver, Colo.	1923	1	10,000	5	268,000	------	----------	14	153,000	614	647,000	13	61,000	3	978,000	------	----------
	1924	------	----------	7	334,500	3	118,000	20	180,000	537	296,900	18	43,000	4	217,000	6	117,200
Des Moines, Iowa	1923	4	92,600	2	72,000	6	106,500	3	11,500	236	106,225	32	125,600	------	----------	------	----------
	1924	------	----------	5	24,500	3	22,000	17	59,200	334	85,845	11	29,000	------	----------	------	----------
Detroit, Mich.	1923	------	----------	14	533,920	60	2,172,936	39	577,110	6,504	1,950,100	68	299,400	------	----------	8	950,500
	1924	1	76,000	18	1,167,275	93	2,963,854	49	737,350	7,398	2,323,501	78	193,600	1	1,080,000	42	7,382,788
Fall River, Mass.	1923	3	18,200	------	----------	10	43,450	42	202,800	223	106,266	2	14,000	------	----------	2	30,050
	1924	2	225	------	----------	3	3,400	26	57,450	166	62,408	1	40,000	------	----------	1	20,000
Fort Worth, Tex.	1923	4	23,750	10	124,500	8	68,200	13	23,150	132	24,241	6	21,500	------	----------	------	----------
	1924	6	144,000	6	171,300	10	219,000	4	201,500	80	12,675	12	30,150	2	195,000	------	----------
Grand Rapids, Mich.	1923	------	----------	------	----------	9	213,000	------	----------	927	260,425	------	----------	------	----------	------	----------

Fall River, Mass	1923	3	18,200			10	43,450	42	202,800	223	106,266	2	14,000			2	30,050
	1924	2	225			3	3,400	26	57,450	166	62,408	1	40,000			1	20,000
Fort Worth, Tex	1923	4	23,750	10	124,500	8	68,200	13	23,150	132	24,241	6	21,500				
	1924	6	144,000	6	171,300	10	219,000	4	201,500	80	12,675	12	30,150	2	195,000		
Grand Rapids, Mich	1923					9	213,000			927	260,425						
	1924	1	107,000	1	11,000	17	150,500	6	119,000	1,060	284,675	18	63,300	2	120,000		
Hartford, Conn	1923					6	91,050			259	257,880			8	424,117		
	1924	2	27,872	3	349,176	4	8,100	38	87,995	366	281,889	14	55,900			3	272,000
Houston, Tex	1923	5	555,417	7	62,395	30	275,056	11	83,591	5	12,737	11	19,600	3	947,627	12	4,154,600
	1924	5	439,748	13	147,196	23	428,810	8	11,750	15	3,286	16	21,100			7	285,175
Indianapolis, Ind	1923	7	183,895	5	91,350	38	526,800	30	436,200	1,269	340,396	41	159,850			10	1,428,800
	1924	4	85,258	7	155,200	23	572,176	29	196,830	1,158	357,891	28	78,850			3	1,110,000
Jersey City, N. J	1923			3	609,000	27	344,200	20	193,500	153	145,717	1	1,545	4	686,000	6	105,500
	1924			4	250,150	21	620,500	20	187,675	146	148,317	1	300	4	220,000	4	132,950
Kansas City, Kans	1923	1	126,000	4	51,200			1	4,500	171	31,175	9	21,000			1	287,000
	1924			6	259,300					162	39,410						
Kansas City, Mo	1923	4	316,600	1	150,000	8	96,900	8	94,000	558	116,000	57	61,250			1	25,000
	1924	2	13,000	4	53,500	7	191,600	9	106,000	390	95,600	60	65,900	2	100,000	2	318,000
Los Angeles, Calif	1923	42	2,265,795	21	956,900	306	5,123,040	91	1,766,316	7,532	1,841,024	227	281,210	6	104,400	19	2,618,094
	1924	36	2,899,550	26	899,660	327	3,944,839	74	1,667,991	6,946	1,673,147	328	277,075	7	311,600	1	50,000
Louisville, Ky	1923	3	250,000	6	716,000	5	508,000	25	476,000	251	95,000	6	30,000	3	1,000,000	3	100,000
	1924	1	60,000	6	123,200	21	2,372,850			292	195,815						
Lowell, Mass	1923					7	349,220	23	55,270	171	51,335	5	42,300			1	15,000
	1924			1	98,000	2	8,200	29	44,230	161	50,392	4	27,900			1	50,000
Memphis, Tenn	1923	5	38,125	7	123,125	6	55,625	2	135,000	504	151,125	8	50,000			1	1,250
	1924	2	9,100	8	206,700	10	960,450	4	109,200	568	167,960	8	62,400	2	109,200		
Milwaukee, Wis	1923			5	193,090	18	457,900			1,828	1,321,393					27	520,092
	1924	1	105,000	3	350,000	19	560,500			1,785	1,629,847	32	93,700			12	1,270,400
Minneapolis, Minn	1923			1	90,000	17	201,070	24	190,140	1,653	424,510	31	58,600	1	60,000	15	732,805
	1924			6	170,900	9	118,800	20	76,250	1,589	353,980	32	70,600	2	87,000	9	218,850
Nashville, Tenn	1923	1	100,000	2	16,000	11	520,000	2	4,000	89	16,880	7	28,000				
	1924			3	11,500	4	172,000	5	91,000	83	17,310	8	32,600	1	200,000		
Newark, N. J	1923	3	10,300	2	96,000	24	421,062	28	408,000	780	769,863	6	18,225	1	240,000	9	471,400
	1924					33	653,522	30	467,500	941	979,310	19	59,698			18	1,355,050
New Bedford, Mass	1923			5	295,000	16	163,500			329	678,100	3	56,000			1	100,000
	1924			3	155,000	2	45,000			192	343,200	3	38,000	2	270,000	2	850,000
New Haven, Conn	1923	2	205,000	2	124,210	9	215,500	(1)	(1)	[2] 254	[2] 373,000			1	697,000	2	76,540
	1924	3	139,000	1	36,000	4	180,000	(1)	(1)	[2] 370	[2] 317,306			1	107,176	1	30,000
New Orleans, La	1923	8	48,700	2	28,000			6	12,680	34	14,420	8	31,300			4	97,750
	1924	5	129,300	4	278,400	2	28,500	3	10,500	44	14,700	37	127,075	2	470,000	17	644,350
New York, N. Y.:																	
Brooklyn	1923	13	1,629,190	14	1,160,000	109	7,645,400	144	2,580,182	2,733	4,070,273			4	183,000	13	2,034,000
	1924	17	2,725,000	6	193,000	119	4,768,300	123	3,694,000	3,962	6,469,280	29	38,695			3	490,000
Bronx	1923	15	2,139,800	6	217,000	39	1,978,000	141	2,852,760	2,030	4,279,140					5	223,350
	1924	16	1,264,000	5	555,000	43	1,020,200	98	4,485,400	436	271,101	13	50,500			10	862,300
Manhattan	1923	10	546,000	5	906,000	30	8,698,350	30	3,764,000	237	64,355	7	10,200	6	1,380,000	37	22,275,800
	1924	9	2,520,000	3	662,000	44	25,330,800	65	5,895,000	115	373,095	16	45,480	2	650,000	38	47,666,700
Queens	1923	33	830,200	8	233,700	49	1,152,385	45	1,466,000	2,027	1,033,019	28	54,275	2	11,500	36	396,700
	1924	14	1,726,500	5	163,000	58	1,618,025	52	1,402,500	2,912	1,809,019	26	75,800	2	210,000	50	276,555
Richmond	1923	5	312,000	4	34,850	14	95,363	1	41,500	286	92,295	3	10,525			7	64,050
	1924			2	47,000	12	61,300	9	84,500	368	106,848	6	3,250			12	72,175

[1] Included with private garages.

[2] Includes public garages.

TABLE 4.—NUMBER AND ESTIMATED COST OF BUILDINGS (NEW CONSTRUCTION, AND REPAIRS, ALTERATIONS, AND ADDITIONS TO OLD BUILDINGS) COVERED BY PERMITS ISSUED IN THE FIRST HALF OF 1923 AND OF 1924, BY INTENDED USE OF BUILDINGS—Contd.

PART 2.—NEW NONRESIDENTIAL BUILDINGS—Continued.

City and State	First half of each year	Amusement and recreation places		Churches		Factories, shops, etc.		Garages (public)		Garages (private)		Gasoline and service stations		Institutions		Office buildings	
		Number	Cost	Number	Cost	Number	Cost	Number	Cost	Number	Cost	Number	Cost	Number	Cost	Number	Cost
Norfolk, Va.	1923	5	$12,281	5	$127,200	5	$75,300	3	$18,450	281	$53,813	3	$6,500	1	$4,500	5	$31,782
	1924	1	100	5	125,500	10	3,425	1	800	271	49,560	2	8,500	1	16,000	1	3,500
Oakland, Calif.	1923	6	124,681	3	25,000	47	437,270	54	174,177	1,390	314,240	18	39,950	1	175,000	31	376,855
	1924	5	87,800	2	48,860	31	310,825	76	421,640	1,713	379,449	10	17,950	----	----------	39	861,517
Omaha, Nebr.	1923	----	----------	4	33,400	8	98,100	6	69,500	304	96,482	21	71,750	----	----------	4	756,800
	1924	1	17,000	2	68,300	----	----------	7	60,500	259	80,260	15	24,110	1	30,000	3	18,200
Paterson, N. J.	1923	----	----------	1	20,000	12	121,900	3	25,000	249	214,180	2	17,500	----	----------	2	43,400
	1924	----	----------	1	1,000	12	351,000	1	2,000	185	151,570	10	14,800	1	140,000	2	27,600
Philadelphia, Pa.	1923	28	658,165	3	415,000	98	4,523,130	22	822,995	1,100	1,330,365	4	59,700	1	18,000	36	8,497,200
	1924	1	135,000	18	1,950,200	97	4,550,560	129	1,371,614	1,287	2,152,121	5	65,000	3	636,000	19	8,348,700
Pittsburgh, Pa.	1923	6	518,500	4	406,000	39	1,392,057	25	340,900	1,268	744,914	9	45,000	6	200,485	7	590,000
	1924	17	134,400	14	428,220	57	1,553,154	11	57,150	1,276	856,801	7	11,800	4	55,000	19	562,630
Portland, Oreg.	1923	9	200,000	----	----------	36	319,400	36	683,910	1,773	265,380	----	----------	----	----------	3	352,400
	1924	8	252,000	----	----------	31	273,500	35	584,000	2,154	358,330	----	----------	1	25,000	7	1,304,350
Providence, R. I.	1923	----	----------	3	197,000	21	245,000	----	----------	617	1,482,400	----	----------	----	----------	11	166,900
	1924	2	245,000	5	700,000	12	300,400	105	800,000	583	959,000	19	149,600	----	----------	11	667,200
Reading, Pa.	1923	3	47,350	2	79,000	25	682,025	5	95,000	316	214,250	----	----------	----	----------	3	88,000
	1924	4	111,750	----	----------	14	182,875	9	37,000	294	159,300	16	5,800	----	----------	3	100,000
Richmond, Va.	1923	----	----------	1	23,000	12	419,681	4	75,000	371	170,326	----	----------	----	----------	11	2,480,500
	1924	2	75,000	2	36,500	----	----------	8	215,000	303	142,616	----	----------	----	----------	4	18,150
Rochester, N. Y.	1923	----	----------	2	250,000	7	430,750	15	254,580	1,517	639,979	14	13,950	1	25,000	4	311,300
	1924	4	160,000	5	1,479,000	15	482,800	13	235,740	1,552	666,561	31	80,500	2	190,000	4	1,505,000
St. Louis, Mo.	1923	9	69,900	3	283,000	50	1,271,650	86	365,865	2,264	474,955	10	20,580	----	----------	14	792,150
	1924	54	30,350	4	48,500	53	953,100	91	417,860	3,003	665,959	----	----------	1	1,000,000	3	141,000
St. Paul, Minn.	1923	5	188,600	6	212,627	18	957,580	21	274,700	1,115	282,242	39	124,500	1	100,000	5	58,500
	1924	1	840	3	250,260	3	51,000	7	136,980	1,079	248,604	10	32,880	2	257,880	1	3,000
Salt Lake City, Utah.	1923	----	----------	1	113,000	13	204,050	----	----------	68	16,503	8	14,800	----	----------	3	943,000
	1924	----	----------	3	81,650	2	34,000	2	27,000	84	15,328	16	62,400	1	8,000	1	352,000
San Antonio, Tex.	1923	1	28,500	5	319,000	2	181,000	3	20,100	232	40,693	4	20,550	----	----------	1	250,000
	1924	1	4,000	7	234,300	1	5,500	3	72,000	314	54,780	11	14,350	1	30,000	1	115,000
San Francisco, Calif.	1923	7	220,000	5	265,000	73	1,501,589	14	231,800	119	104,055	18	30,650	1	10,000	10	530,850
	1924	3	203,000	2	35,500	69	1,662,043	10	285,500	127	79,014	10	10,100	3	311,000	15	1,980,150
Scranton, Pa.	1923	----	----------	----	----------	----	----------	8	92,000	269	133,252	6	21,600	----	----------	----	----------
	1924	2	60,000	----	----------	3	40,000	12	65,000	205	178,196	4	22,000	1	55,000	----	----------
Seattle, Wash.	1923	5	138,000	4	111,000	20	166,480	21	252,100	1,641	174,363	----	----------	----	----------	16	256,325
	1924	13	1,479,300	6	265,700	34	304,250	35	470,200	1,460	202,770	----	----------	----	----------	17	2,286,700
Spokane, Wash.	1923	2	40,000	----	----------	7	131,500	7	82,000	495	54,575	6	14,200	1	60,000	----	----------
	1924	1	15,000	----	----------	8	52,600	9	116,500	529	58,310	10	10,140	----	----------	1	1,000
Springfield, Mass.	1923	1	500,000	1	56,500	5	43,900	----	----------	493	304,215	13	177,700	1	70,000	7	99,600
	1924	----	----------	----	----------	7	194,055	----	----------	660	536,555	17	142,700	2	493,333	----	----------
Syracuse, N. Y.	1923	2	46,000	1	35,000	8	149,000	6	27,400	832	166,400	16	16,000	----	----------	----	----------
	1924	1	100,000	1	18,000	11	51,425	9	162,600	752	297,791	9	22,100	----	----------	3	23,000

Springfield, Mass	1923	1	500,000	1	56,500	5	43,900			493	304,215	13	177,700	1	70,000	7	99,600
	1924					7	194,055			660	536,555	17	142,700	2	493,333		
Syracuse, N. Y	1923	2	46,000	1	35,000	8	149,000	6	27,400	832	166,400	16	16,000				
	1924	1	100,000	1	18,000	11	51,425	9	162,600	752	297,791	9	22,100			3	23,000
Toledo, Ohio	1923			6	376,000	27	810,885	20	116,950	1,213	295,910	19	22,785				
	1924	4	105,037	4	435,000	27	595,935	5	229,000	1,698	413,505	9	16,350			1	28,000
Trenton, N. J	1923	2	25,149	1	29,500	29	212,360	2	53,300	369	192,659	3	34,559			3	1,010,000
	1924			2	77,913	21	293,900	28	89,300	355	142,084	7	12,250			1	9,844
Washington, D. C	1923	1	400,000	3	139,000	7	236,370	22	200,000	1,430	924,429	4	34,606			14	1,797,725
	1924	2	801,200	5	197,500	7	137,500	20	250,000	1,174	1,121,239	12	73,400	2	224,583	5	487,000
Wilmington, Del	1923					17	42,005			377	120,602	2	10,000	1	208,260		
	1924	1	1,250			4	13,700			408	147,497	1	900			3	4,792
Worcester, Mass	1923	5	16,300	3	460,000	9	114,050	76	247,075	288	168,445	8	23,735			2	2,800
	1924	4	101,335			12	362,800	167	351,091	277	151,275					4	902,000
Yonkers, N. Y	1923	1	900			9	532,300	5	91,500	131	103,650	2	3,200			4	63,000
	1924			1	40,000	2	378,000	15	197,500	184	133,861	1	400			3	256,500
Youngstown, Ohio	1923	2	3,500	2	19,000	8	27,000	7	77,000	500	75,000	6	5,200			10	120,000
	1924	3	30,000	3	510,000	8	20,000	19	75,000	572	95,000	6	5,100			9	650,000
Total	1923	313	15,888,753	293	15,524,677	1,885	63,534,026	[1] 1,451	[1] 23,395,441	[1] 70,182	[1] 36,318,214	1,061	3,312,691	71	9,466,539	606	84,653,868
	1924	315	21,813,015	332	18,027,860	1,853	81,236,483	[1] 1,935	[1] 30,875,950	[1] 74,824	[1] 40,293,106	1,294	3,423,821	76	12,355,072	550	100,269,781

[1] See notes to details.

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TABLE 4.—NUMBER AND ESTIMATED COST OF BUILDINGS (NEW CONSTRUCTION, AND REPAIRS, ALTERATIONS, AND ADDITIONS TO OLD BUILDINGS) COVERED BY PERMITS ISSUED IN THE FIRST HALF OF 1923 AND OF 1924, BY INTENDED USE OF BUILDINGS—Contd.

PART 2.—NEW NONRESIDENTIAL BUILDINGS—Continued

City and State	First half of each year	Public buildings		Public works and utilities		Schools, libraries, etc.		Sheds		Stables and barns		Stores, warehouses, etc.		All other		Total	
		Number	Cost	Number	Cost	Number	Cost	Number	Cost	Number	Cost	Number	Cost	Number	Cost	Number	Cost
Akron, Ohio	1923	1	$5,650			2	$229,200	27	$18,855			36	$505,200			1,044	$1,362,912
	1924					1	18,000	18	2,503			5	66,700			1,075	752,412
Albany, N. Y	1923			3	$47,500	4	991,000	27	9,855	3	$1,950	14	588,800			208	3,102,320
	1924					1	8,000	46	7,265			13	365,000			341	920,340
Atlanta, Ga	1923	6	62,285			6	1,456,716	98	31,887			97	2,072,476			476	6,537,511
	1924					17	234,150	104	22,635			71	730,500			420	1,346,378
Baltimore, Md	1923			5	86,000	9	2,157,000			2	5,000	90	694,500			1,874	6,392,775
	1924	3	30,000	8	627,000	5	910,000	15	6,950	3	6,675	39	1,602,500	1	$68,000	2,165	9,498,975
Birmingham, Ala	1923			2	5,050	5	414,408	73	7,315	5	4,235	58	1,015,956			331	2,075,666
	1924	2	23,760	8	1,039,885			67	8,690	1	90	79	496,210			360	2,731,085
Boston, Mass	1923	2	697,949	4	383,000	4	1,140,151	129	98,330			64	1,360,075			893	9,298,199
	1924	2	450,000	4	347,000	1	44,000	218	169,628	2	9,000	77	1,230,710			1,184	10,208,924
Bridgeport, Conn	1923					1	230,798	2	1,100	1	2,100	124	126,700			349	1,013,704
	1924							19	12,685			31	275,750			377	646,651
Buffalo, N. Y	1923					2	2,200,000	90	15,916	6	12,060	60	1,121,975	1	25,000	2,244	6,904,086
	1924					3	565,000	39	8,815	1	900	47	731,075			2,715	4,009,104
Cambridge, Mass	1923							10	5,050	1	3,000	17	748,665			183	1,229,594
	1924			2	10,700	1	150,000	19	4,010			6	55,200			163	849,645
Camden, N. J	1923					3	671,550			3	2,750	11	204,605	1	187,000	239	3,371,600
	1924			1	3,000	2	200,000	1	400	2	2,600	5	29,000			238	965,385
Chicago, Ill	1923			21	3,838,600	11	3,946,000	519	155,700	13	42,000	446	16,876,275	4	23,000	5,973	57,662,175
	1924			3	1,570,000	17	4,698,000	634	165,474	12	74,000	412	7,067,960	5	8,800	7,336	48,624,209
Cincinnati, Ohio	1923			1	8,000	7	1,155,000	96	20,855	8	9,975	26	579,875	2	25,890	1,231	5,743,180
	1924					2	255,000					43	1,229,050			953	2,740,465
Cleveland, Ohio	1923	1	300,000					1,156	440,325			100	3,024,525			4,612	7,917,575
	1924	1	150,000			4	1,150,000	600	220,000			92	1,725,350			4,082	7,017,525
Columbus, Ohio	1923			2	8,800	2	1,465,000	61	34,445	1	5,000	22	303,600			1,577	3,032,870
	1924					1	200,000	73	115,020			30	354,450			1,434	2,212,565
Dallas, Tex	1923											190	2,446,042			330	3,346,716
	1924	5	53,300			1	518,417					181	2,759,832			305	5,307,312
Dayton, Ohio	1923			1	400,000			72	22,589	3	1,050	14	243,225			916	2,343,641
	1924					2	165,830	56	27,883	3	2,080					779	2,952,958
Denver, Colo	1923					2	210,000	272	53,350			19	1,088,000	188	280,700	1,131	3,749,050
	1924	2	46,000	1	13,000	17	3,269,000	437	76,050	1	15,000	56	763,200			1,109	5,488,850
Des Moines, Iowa	1923			5	11,000	3	160,000	9	3,675			38	465,300			338	1,154,400
	1924			1	2,000	1	4,500			4	1,130	51	593,160			427	821,335
Detroit, Mich	1923	3	508,600			9	589,284					227	2,650,412			6,932	10,232,262
	1924			7	529,000	13	1,399,200	120	115,000			272	6,728,706			8,092	24,696,274
Fall River, Mass	1923			1	6,000	2	598,000	19	4,370	2	1,100	22	139,370	2	36,000	330	1,199,606
	1924							14	3,415	1	30	20	66,065	2	350	236	253,343
Fort Worth, Tex	1923	9	79,650	3	19,200	1	3,800	14	3,215	3	1,615	50	522,354			248	915,175
	1924											99	231,300			209	1,364,108

Detroit, Mich	1923	3	508,600			9	589,284					227	2,650,412			6,932	10,232,262
	1924			7	529,000	13	1,399,200	120	115,000			272	6,728,706			8,092	24,696,274
Fall River, Mass	1923			1	6,000	2	598,000	19	4,370	2	1,100	22	139,370	2	36,000	330	1,199,606
	1924							14	3,415	1	30	20	66,065	2	350	236	253,343
Fort Worth, Tex	1923	9	79,650	3	19,200	1	3,800	14	3,215	3	1,615	50	522,354			248	915,175
	1924					1	150,000	46	8,468	3	715	39	231,300			209	1,364,108
Grand Rapids, Mich	1923							31	5,370			18	104,500	68	1,858,750	1,053	2,442,045
	1924			2	645,000	5	1,406,000	56	12,075			26	197,700	100	200,000	1,294	3,316,250
Hartford, Conn	1923							65	101,956			11	947,400			349	1,822,403
	1924			2	6,700	2	1,383,142	21	4,535			10	260,700			465	2,738,008
Houston, Tex	1923			4	17,000	1	120,000	12	14,700	1	200	52	622,667	2	15,801	156	6,901,391
	1924			8	835,680	1	94,550	12	14,830			40	418,583			148	2,700,708
Indianpolis, Ind	1923			1	2,000	1	67,200	77	10,519	10	2,438	85	820,711	3	2,580	1,577	4,072,739
	1924					2	197,111	148	26,286	4	650	45	641,475	4	6,143	1,455	3,427,870
Jersey City, N. J	1923			5	176,500	3	2,341,075	14	10,100	1	1,200	27	151,784			264	4,766,121
	1924			1	231,463	3	1,780,000	5	14,606	2	4,200	10	155,500			221	3,727,661
Kansas City, Kans	1923			2	210,738	6	448,566	17	2,580	3	250	34	110,440	9	1,900	258	1,295,344
	1924					2	147,290					47	323,250			217	769,250
Kansas City, Mo	1923			1	30,000	2	157,000	41	12,000	8	2,100	122	1,891,200	18	9,200	829	2,961,250
	1924					2	201,000	18	3,550	1	50	55	1,272,050			552	2,420,250
Los Angeles, Calif	1923			13	1,004,300	50	3,677,800	[1] 1,624	[1] 564,290	(2)	(2)	519	7,303,331	32	292,940	10,492	27,799,440
	1924			4	116,800	56	1,878,622	[1] 1,679	[1] 552,753	(2)	(2)	534	7,347,660	27	564,764	10,045	22,184,461
Louisville, Ky	1923	1	66,000	1	100,000	13	550,000	620	75,000	5	55,000	150	793,000			1,092	4,814,000
	1924											46	157,475			366	2,909,340
Lowell, Mass	1923							38	5,830	2	50,150	4	69,000	1	1,700	252	639,805
	1924							36	9,195			4	7,650			238	295,567
Memphis, Tenn	1923			3	519,375	2	261,250	25	6,625	2	3,750	63	968,750			628	2,314,000
	1924	3	535,600	2	162,500	4	478,400	30	24,180			74	1,044,940			715	3,870,630
Milwaukee, Wis	1923					4	552,000	[1] 220	[1] 146,168	(2)	(2)	90	1,692,500			2,192	4,883,143
	1924			1	1,529,325	4	495,360	170	180,761	1	75	58	901,767			2,086	6,462,735
Minneapolis, Minn	1923	1	32,000	2	2,300	7	751,425	79	16,300	7	4,500	103	1,410,110	1	400	1,942	3,974,160
	1924	4	50,920			5	528,500	51	5,125	2	70,100	78	727,000			1,807	2,478,025
Nashville, Tenn	1923	2	1,248,500					73	7,492			22	146,485			209	2,087,357
	1924			2	15,700	1	40,000	13	11,050			27	151,175	3	73,000	150	815,335
Newark, N. J	1923			5	137,196	1	150,000	10	10,197	7	7,653	60	711,821			936	3,451,717
	1924	5	685,464			1	342,000					62	1,135,675	31	48,865	1,140	5,727,084
New Bedford, Mass	1923			1	50,000	1	300,000					42	402,800			398	2,045,400
	1924					1	130,000					15	156,500			220	1,987,700
New Haven, Conn	1923	1	13,377			1	84,000	46	59,100			2	24,000			320	1,871,727
	1924					1	110,000					60	90,000			441	1,109,482
New Orleans, La	1923			3	148,000	2	800,600	50	10,515			14	117,900	43	19,910	174	1,329,775
	1924			2	124,000	3	534,075	30	7,300	3	8,500	38	1,024,500	2	600	192	3,401,800
New York, N. Y.:																	
Brooklyn	1923	1	35,000			11	5,700,000	451	590,500			123	1,317,200			3,616	26,944,745
	1924	3	6,450,000	3	130,000	14	10,005,000	41	41,065	6	2,225	159	1,726,855	462	385,020	4,947	37,118,440
Bronx	1923	2	90,000			10	4,997,500					58	1,143,200	1	25,000	2,307	17,945,750
	1924	2	2,554,000			8	4,345,000			2	1,300	51	1,946,300	1	5,000	685	17,360,101

[1] Includes stables and barns.

[2] Included with sheds.

TABLE 4.—NUMBER AND ESTIMATED COST OF BUILDINGS (NEW CONSTRUCTION, AND REPAIRS, ALTERATIONS, AND ADDITIONS TO OLD BUILDINGS) COVERED BY PERMITS ISSUED IN THE FIRST HALF OF 1923 AND OF 1924, BY INTENDED USE OF BUILDINGS—Contd.

PART 2.—NEW NONRESIDENTIAL BUILDINGS—Concluded

City and State	First half of each year	Public buildings		Public works and utilities		Schools, libraries, etc.		Sheds		Stables and barns		Stores, warehouses, etc.		All other		Total	
		Number	Cost	Number	Cost	Number	Cost	Number	Cost	Number	Cost	Number	Cost	Number	Cost	Number	Cost
New York, N. Y.—Concluded.																	
Manhattan	1923	3	$825,000	3	$900,000	6	$3,011,500	29	$117,435	1	$37,000	35	$2,183,900			439	$44,719,540
	1924	2	635,000			11	6,355,000					39	2,213,400	17	$135,175	361	92,481,650
Queens	1923	1	45,000	7	171,500	9	1,707,000	130	47,225	11	22,750	171	2,225,975	3	3,200	2,560	9,400,379
	1924	1	160,000	5	89,050	10	6,785,000	42	34,400	10	87,460	264	3,143,369	122	56,880	3,573	17,637,558
Richmond	1923	1	101,500	3	9,723	1	400,000	32	4,592	3	670	36	145,189			396	1,312,257
	1924	1	4,000			3	1,185,000			1	250	42	177,875	75	84,515	531	1,826,713
Norfolk, Va	1923	8	78,790	2	20,000	2	458,400	27	5,335	11	2,290	47	248,017			405	1,142,658
	1924			4	115,125	2	45,500	28	7,600	1	75	14	487,700			341	863,385
Oakland, Calif	1923			8	151,450	3	153,716					124	2,009,036	4	255,950	1,689	4,237,325
	1924			6	295,948	9	25,300			4	18,800	92	1,007,540	9	34,020	1,996	3,509,649
Omaha, Nebr	1923							13	7,160			63	483,925	7	24,800	430	1,641,917
	1924					1	34,000	5	1,480			62	498,980			356	832,830
Paterson, N. J	1923					1	760,125	20	2,736	1	350	21	211,765			312	1,416,956
	1924					2	1,469,000					14	164,000			228	2,320,970
Philadelphia, Pa	1923			1	12,000	10	4,794,755	93	116,290	6	101,800	59	2,972,250	2	3,000	1,463	24,324,650
	1924	6	291,430	8	634,300	8	2,654,590	94	121,435	2	12,500	56	976,000			1,733	23,899,450
Pittsburgh, Pa	1923			2	84,700	9	1,568,550	82	23,592	1	12,000	49	985,000	6	47,000	1,513	6,958,698
	1924	4	50,300	9	604,500			21	24,580	13	10,985	81	1,326,769	26	62,970	1,559	5,739,259
Portland, Oreg	1923					8	1,355,265	140	61,550			67	613,915			2,072	3,851,820
	1924			3	36,800	2	13,600	168	71,125			63	459,450	2	141,530	2,474	3,519,685
Providence, R. I	1923					2	405,000	47	13,600	3	1,600	118	1,359,000			822	3,870,500
	1924					3	1,375,000	61	19,400	3	1,800	109	1,093,300			913	6,310,700
Reading, Pa	1923			1	13,000	1	102,000	28	3,300	5	10,250	35	190,650			424	1,524,825
	1924			1	85,000	2	844,577	39	6,850	2	500	11	16,000	1	25,000	396	1,573,652
Richmond, Va	1923	1	31,000			3	113,000	287	92,943			60	351,643			750	3,757,093
	1924					1	87,000	336	92,030			49	618,050			705	1,284,346
Rochester, N. Y	1923			2	154,000	2	121,580	62	27,225	3	3,675	11	507,000	1	1,500	1,641	2,740,539
	1924			3	193,000	3	995,000	52	24,990	18	23,135	22	1,325,568			1,724	7,361,294
St. Louis, Mo	1923					7	855,000	646	98,160	36	9,145	105	1,778,250			3,230	6,018,655
	1924			1	10,000	30	1,693,392	431	101,224			195	1,536,945			3,866	6,598,330
St. Paul, Minn	1923			1	40,000	8	701,136	52	9,290	5	860	52	602,832	1	2,500	1,329	3,555,367
	1924			1	240,000	7	912,515	134	126,082			28	331,320			1,276	2,591,961
Salt Lake City, Utah	1923							7	2,255			12	23,780	4	10,500	116	1,327,888
	1924							2	900			15	19,500	6	27,050	132	627,828
San Antonio, Tex	1923					11	908,676	109	23,200			63	217,305			422	2,009,024
	1924			1	45,000			9	1,775			61	323,091			410	899,996
San Francisco, Calif	1923	2	65,535			10	1,000,584	42	19,005			108	2,433,915			409	6,412,983
	1924	3	109,321	7	412,330	1	25,000	14	27,529	1	300	99	2,521,365			364	7,662,152

San Francisco, Calif.	1923	2	65,535			10	1,000,584	42	19,005			108	2,433,915			409	6,412,983
	1924	3	109,321	7	412,330	1	25,000	14	27,529	1	300	99	2,521,365			364	7,662,152
Scranton, Pa.	1923							6	4,000	2	600	22	287,600			313	539,052
	1924											20	200,000			247	620,196
Seattle, Wash.	1923			6	152,000	4	160,500	249	24,315	5	1,025	134	975,350			2,105	2,411,458
	1924			4	515,000	6	1,335,000	220	48,305	3	780	101	804,830			1,899	7,712,835
Spokane, Wash.	1923							6	2,395	2	275	11	37,600	4	38,500	541	461,045
	1924	1	1,000			1	1,000					17	74,800			577	330,350
Springfield, Mass.	1923	1	40,000	3	123,000	1	200,000	8	1,925	2	800	36	1,175,300			572	2,792,940
	1924			2	610,000	2	60,000	11	19,100			34	341,095			735	2,396,838
Syracuse, N. Y.	1923	1	15,000			2	1,200,000	6	700			1	35,000			875	1,690,500
	1924	1	23,800									22	80,315	14	1,960	823	780,991
Toledo, Ohio	1923			2	132,000	3	467,000					63	1,114,535			1,353	3,336,065
	1924					3	929,406					65	1,217,410			1,816	3,969,643
Trenton, N. J.	1923							66	9,808	2	19,037	27	174,900	1	350	505	1,761,622
	1924			1	9,300			60	8,422	2	1,350	17	71,950			494	716,313
Washington, D. C.	1923	1	55,376	1	9,905	13	1,693,482	161	60,281	1	40,000	63	1,733,246			1,721	7,324,420
	1924	2	18,263	2	48,490	11	1,154,179	82	16,535	1	850	70	1,352,200	1	2,000	1,396	5,884,939
Wilmington, Del.	1923			1	4,775							14	63,550	1	700	413	449,892
	1924			2	2,700	1	475,000	6	1,090			9	16,547			435	663,476
Worcester, Mass.	1923			1	4,500	1	6,879	97	13,195	1	1,000	27	672,695	29	65,150	547	1,795,824
	1924			1	650	2	138,350	85	26,910	1	200	22	176,385	29	106,885	604	2,317,881
Yonkers, N. Y.	1923			2	300,300							18	407,800			172	1,502,650
	1924					1	735,000	4	8,000	1	1,800	16	113,300	1	3,000	229	1,867,361
Youngstown, Ohio	1923					1	250,000	10	1,500	10	1,000	7	7,500	5	2,000	568	588,700
	1924					1	100,000	6	900	6	800	9	25,000	10	15,000	652	1,526,800
Total	1923	49	4,396,212	135	9,493,407	316	60,970,471	[3] 8,613	[3] 3,369,086	[3] 208	[3] 485,203	4,983	83,755,152	444	3,260,831	90,610	417,824,571
	1924	53	12,322,158	123	11,885,946	328	67,462,556	[3] 6,746	[3] 2,671,864	[3] 123	[3] 360,905	4,726	69,502,527	951	2,056,527	94,229	474,557,571

[3] See notes to details.

TABLE 4.—NUMBER AND ESTIMATED COST OF BUILDINGS (NEW CONSTRUCTION, AND REPAIRS, ALTERATIONS, AND ADDITIONS TO OLD BUILDINGS) COVERED BY PERMITS ISSUED IN THE FIRST HALF OF 1923 AND OF 1924, BY INTENDED USE OF BUILDINGS—Contd.

PART 3.—REPAIRS, ALTERATIONS, AND ADDITIONS TO OLD BUILDINGS, AND GRAND TOTAL OF ALL PERMITS

City and State	First half of year	Residential buildings [1]				Nonresidential buildings [1]		Total repairs, etc.		Installation permits		Grand total of all permits		Rank in cost of construction	Alterations that changed family accommodations	
		Housekeeping dwellings		Nonhousekeeping dwellings												
		Number	Cost	Number	Cost	Number	Cost	Number	Cost	Number	Cost	Number	Cost		Families before	Families after
Akron, Ohio	1923							373	$785,845	135	$47,795	1,882	$3,722,317	55		
	1924							374	449,821	121	40,019	2,125	3,806,217	53		
Albany, N. Y.	1923	352	$297,633			255	$834,742	607	1,132,375	53	123,012	1,019	5,833,007	41		
	1924							3,314	1,724,682			3,934	6,570,772	41		
Atlanta, Ga.	1923							693	949,416	120	299,347	2,642	17,323,337	14		
	1924							736	849,317	101	93,532	2,414	7,795,834	38	100	185
Baltimore, Md.	1923							6,388	3,130,230			10,463	19,590,505	11		
	1924							7,492	4,445,640	11	3,135	12,558	28,098,750	9		
Birmingham, Ala.	1923	951	272,961	2	$10,100	199	133,120	1,152	416,181	425	214,494	3,321	5,835,985	40		
	1924	1,015	463,807			190	264,163	1,205	727,970	391	300,505	3,711	7,190,720	40		
Boston, Mass.	1923	2,087	1,297,612	48	66,823	780	3,715,009	2,915	5,079,444	877	1,624,674	5,069	24,306,297	8		
	1924	2,365	1,549,308	73	152,173	869	4,677,113	3,307	6,378,594	1,148	1,650,998	6,266	29,120,541	7		
Bridgeport, Conn.	1923	40	50,300			40	362,823	80	413,123	8	7,850	486	1,733,247	66		
	1924	182	35,013			42	171,563	224	206,576	12	2,775	697	1,342,427	67		
Buffalo, N. Y.	1923	570	522,670	6	22,535	810	564,099	886	1,109,304	16	30,860	4,394	13,531,920	22		
	1924	824	609,108			237	1,589,550	1,061	2,198,658			5,618	14,184,812	20		
Cambridge, Mass.	1923	206	144,712			117	335,198	323	479,910	30	28,890	584	2,600,294	62		
	1924	238	126,624	16	22,375	78	330,815	332	479,814	26	34,363	590	2,902,172	59		
Camden, N. J.	1923	191	146,702			50	178,100	241	324,802			732	4,836,937	46		
	1924	330	196,139			88	119,345	418	315,484			862	2,350,494	62		
Chicago, Ill.	1923	1,913	1,127,600	6	59,400	1,274	7,335,097	3,193	8,522,097			15,236	189,914,112	2		
	1924	1,855	704,905	1	50,000	1,456	6,335,600	3,312	7,090,505	211	297,065	18,519	166,436,214	2		
Cincinnati, Ohio	1923	1,228	597,200	6	60,700	784	1,434,057	2,018	2,091,957	321	449,075	4,684	16,200,802	16		
	1924	1,175	1,288,484			461	583,441	1,936	1,871,925	38	239,300	3,849	13,566,270	21		
Cleveland, Ohio	1923							5,977	7,576,575	149	25,850	12,636	31,542,950	7		
	1924							2,555	4,490,015	129	24,750	8,832	32,243,490	6		
Columbus, Ohio	1923	544	424,510	4	213,500	171	349,020	719	987,030	91	16,841	3,698	11,706,541	27	68	158
	1924	684	510,625	6	107,950	222	514,660	912	1,133,235	62	17,606	3,323	9,386,206	31	93	222
Dallas, Tex.	1923	506	506,730			107	378,795	613	885,525			2,574	12,089,377	26		
	1924	496	544,396			126	612,341	622	1,156,737			2,565	14,738,319	18		
Dayton, Ohio	1923	572	294,823	6	11,400	223	400,191	801	706,414			2,328	6,537,642	37		
	1924							393	182,770	375	1,520	1,911	5,092,553	46	37	74
Denver, Colo.	1923							926	1,149,200			3,464	10,950,250	29		
	1924	758	544,000			347	272,750	1,105	816,750			3,526	11,812,200	23		
Des Moines, Iowa	1923	97	84,915			15	65,350	112	150,265	1	4,000	1,173	4,299,280	51		
	1924	114	69,555			46	253,900	160	323,455			1,190	3,478,012	54		

Denver, Colo	1923							926	1,149,200			3,464	10,950,250	29		
	1924	758	544,000			347	272,750	1,105	816,750			3,526	11,812,200	23		
Des Moines, Iowa	1923	97	84,915			15	65,350	112	150,265	1	4,000	1,173	4,299,280	51		
	1924	114	69,555			46	253,900	160	323,455			1,190	3,478,012	54		
Detroit, Mich	1923	2,457	1,626,822			845	4,438,688	3,302	6,065,510			17,998	61,616,302	5	96	385
	1924	2,854	1,863,182	9	211,450	930	3,375,162	3,793	5,449,794			20,571	87,195,800	3	108	325
Fall River, Mass	1923	211	317,011			82	272,657	293	589,668			793	2,926,751	61		
	1924	144	166,948			58	117,540	202	284,488			569	1,233,656	68	35	66
Fort Worth, Tex	1923	403	289,828	6	14,275	127	118,702	536	422,805	3	3,575	1,782	4,728,015	47		
	1924	371	273,354	1	7,500	108	186,519	480	467,373			1,299	3,809,352	52		
Grand Rapids, Mich	1923	667	312,285			64	259,090	731	571,375	196	44,260	2,639	5,719,430	42		
	1924	1,076	356,590			69	108,065	1,145	464,655	169	31,195	3,106	5,787,350	43	47	106
Hartford, Conn	1923							589	713,253	50	47,698	1,147	4,646,133	48		
	1924	265	169,547			273	527,253	538	696,800	226	678	1,559	8,415,386	35	9	22
Houston, Tex	1923							2,014	650,818			3,630	12,137,010	25		
	1924							2,133	787,058			3,719	9,017,790	33	3	10
Indianapolis, Ind	1923	3,001	864,272	6	8,960	624	740,751	3,631	1,613,983	409	272,297	7,121	14,485,365	18		
	1924	4,671	1,317,136	2	8,100	162	545,372	4,835	1,870,608	827	431,513	8,393	11,792,844	24		
Jersey City, N. J	1923							406	492,896	9	45,972	944	10,444,039	30		
	1924							432	448,374	6	110,359	909	9,907,629	29		
Kansas City, Kans	1923	240	166,115			60	41,529	300	207,644			1,003	2,548,388	63		
	1924							305	201,450			982	2,069,640	64		
Kansas City, Mo	1923	102	225,510			305	676,540	407	902,050	70	14,050	3,152	14,277,200	19		
	1924	247	148,200	2	13,000	119	634,400	368	795,600	28	2,850	2,356	9,711,550	30		
Los Angeles, Calif	1923							6,493	8,084,372			29,678	93,889,185	3		
	1924							7,059	9,358,607			27,748	78,828,738	4		
Louisville, Ky	1923	350	154,000	182	133,000	121	245,000	653	532,000	5,482	2,356,503	8,532	12,210,953	24		
	1924							746	777,272	6,532	1,904,031	8,783	10,005,143	28		
Lowell, Mass	1923	257	184,455	2	13,000	92	340,411	351	537,866			745	1,962,071	65		
	1924	243	176,095			110	180,390	353	356,485			747	1,407,352	66		
Memphis, Tenn	1923	631	362,000			72	330,375	703	692,375	634	820,500	2,895	9,630,375	33		
	1924	835	473,980			63	264,420	898	738,400	653	1,020,370	3,205	11,290,370	26		
Milwaukee, Wis	1923							1,206	2,684,860	14,184	3,278,339	18,618	19,452,292	12		
	1924							1,214	1,257,111	13,311	3,526,962	17,692	20,865,988	11		
Minneapolis, Minn	1923	1,175	629,055	4	6,600	465	2,028,515	1,644	2,664,170			5,379	15,856,435	17		
	1924	1,317	632,400	3	47,000	226	1,063,105	1,546	1,742,505			4,931	11,345,440	25	34	70
Nashville, Tenn	1923							941	242,317	208	26,778	1,714	4,347,802	49		
	1924	534	269,637			304	6,907	838	266,544	188	14,336	1,545	3,335,005	56		
Newark, N. J	1923	298	427,245			418	2,693,557	716	3,120,802	371	111,453	2,680	16,836,667	15		
	1924							694	2,067,917	386	290,782	2,859	18,831,198	12		
New Bedford, Mass	1923	63	185,500			12	13,600	75	199,100			777	4,324,500	50		
	1924	161	85,900			20	200,000	181	285,900			589	3,917,100	51		
New Haven, Conn	1923							328	610,000			770	3,802,827	54		
	1924							454	720,526	30	2,105	1,075	4,202,199	49		
New Orleans, La	1923	122	216,122			136	357,828	258	573,950			1,507	6,530,340	38		
	1924	185	450,000			134	490,750	319	940,750			1,463	8,400,125	36		

[1] For years in which figures are not shown total repairs, etc., only were reported.

TABLE 4.—NUMBER AND ESTIMATED COST OF BUILDINGS (NEW CONSTRUCTION, AND REPAIRS, ALTERATIONS, AND ADDITIONS TO OLD BUILDINGS) COVERED BY PERMITS ISSUED IN THE FIRST HALF OF 1923 AND OF 1924, BY INTENDED USE OF BUILDINGS—Concluded

PART 3.—REPAIRS, ALTERATIONS, AND ADDITIONS TO OLD BUILDINGS, AND GRAND TOTAL OF ALL PERMITS—Concluded

City and State	First half of year	Residential buildings				Nonresidential buildings		Total repairs, etc.		Installation permits		Grand total of all permits		Rank in cost of construction	Alterations that changed family accommodations	
		Housekeeping dwellings		Nonhousekeeping dwellings												
		Number	Cost	Number	Cost	Number	Cost	Number	Cost	Number	Cost	Number	Cost		Families before	Families after
New York, N. Y.:																
Brooklyn	1923	1,969	$2,750,063	27	$148,600	889	$5,103,162	2,885	$8,001,825	1,320	$920,850	16,163	$147,848,050			
	1924	2,044	2,908,540	30	202,500	746	6,374,835	2,820	9,485,875	1,457	1,798,580	21,331	168,017,220			
Bronx	1923	1,100	1,416,259	2	20,000	1,135	2,324,410	2,237	3,760,669			7,293	89,828,619			
	1924	281	804,170			110	1,837,170	391	2,641,340	2,358	719,327	7,260	90,076,088			
Manhattan	1923	697	4,468,380	150	1,179,145	874	7,685,322	1,721	13,332,847			2,310	94,670,887			
	1924	856	5,100,495	134	2,642,993	779	9,070,138	1,769	16,813,626			2,317	169,848,376	1		
Queens	1923	1,007	757,456			240	1,329,017	1,247	2,086,473	562	186,701	14,216	87,474,688			
	1924	564	499,514	1	600	162	353,490	727	853,604	287	176,135	16,782	110,055,587			
Richmond	1923	176	214,115	1	300	80	170,085	257	384,500	63	7,376	2,120	7,811,142			
	1924	239	278,069			106	111,095	345	389,164	38	7,850	2,519	10,164,187			
Norfolk, Va	1923	138	76,804			90	157,063	228	233,867	118	23,347	1,164	3,598,907	56		
	1924	154	158,375			136	255,743	290	414,118	77	16,052	1,032	3,143,870	58	29	83
Oakland, Calif	1923							1,362	1,072,386	154	57,797	5,440	13,736,197	21		
	1924							1,658	1,440,986	568	111,233	6,479	14,392,125	19		
Omaha, Nebr	1923	94	71,915			50	223,650	144	295,565			1,521	7,427,888	36		
	1924	73	51,765			60	575,815	133	627,580			1,346	5,384,795	45		
Paterson, N. J	1923	634	285,391			319	492,927	953	778,318	23	4,482	1,560	4,187,941	52		
	1924	511	403,000			409	270,021	920	673,021	18	2,700	1,423	5,521,883	44		
Philadelphia, Pa	1923	2,974	5,129,660			1,763	6,558,125	4,737	11,687,785	361	182,825	11,906	75,217,095	4		
	1924							5,423	9,928,255	402	210,220	13,486	72,573,485	5		
Pittsburgh, Pa	1923	707	671,575	15	106,088	350	1,290,348	1,072	2,068,011			3,680	18,028,052	13	2	8
	1924	1,168	776,350	16	27,420	173	662,851	1,357	1,466,621			4,034	16,308,736	16		
Portland, Oreg	1923							3,064	2,147,790			6,777	13,245,980	23		
	1924	2,193	629,350			555	714,460	2,748	1,343,810			7,646	15,032,855	17		
Providence, R. I	1923	1,189	708,600			308	884,000	1,497	1,592,600			2,718	10,290,500	31		
	1924	1,373	758,300	18	55,700	348	1,593,300	1,739	2,407,300			3,009	13,157,500	22		
Reading, Pa	1923	1,116	465,605			129	229,900	1,245	695,505			1,961	3,089,430	60		
	1924	908	240,550			252	400,525	1,160	641,075			1,787	3,472,727	55		
Richmond, Va	1923	292	183,843			211	671,018	503	854,861			1,865	9,333,550	34		
	1924	373	186,344			234	539,733	607	726,077			2,262	8,725,767	34		
Rochester, N. Y	1923	537	505,885			429	512,756	966	1,018,641	16	15,810	3,462	9,680,290	32		
	1924	589	487,937			483	1,536,363	1,072	2,024,300	4	15,300	3,911	18,139,904	14	113	233
St. Louis, Mo	1923	1,896	686,612	12	12,400	963	2,458,865	2,871	3,157,877	632	171,400	8,160	20,683,717	10		
	1924	2,518	827,005	13	11,065	846	1,860,777	3,367	2,698,847	470	116,447	9,098	18,184,464	13		
St. Paul, Minn	1923	550	256,454	2	600	197	623,454	749	880,508			3,179	11,137,777	28		
	1924	820	474,689			34	381,360	854	856,049	29	134,664	3,000	9,025,297	32	5	12
Salt Lake City, Utah	1923	109	87,746			57	165,325	166	253,071			993	3,495,059	57		

St. Louis, Mo.	1923	1,896	686,612	12	12,400	963	2,458,865	2,871	3,157,877	632	171,400	8,160	20,683,717	10		
	1924	2,518	827,005	13	11,065	846	1,860,777	3,367	2,698,847	470	116,447	9,098	18,184,464	13		
St. Paul, Minn.	1923	550	256,454	2	600	197	623,454	749	880,508			3,179	11,137,777	28		
	1924	820	474,689			34	381,360	854	856,049	29	134,664	3,000	9,025,297	32	5	12
Salt Lake City, Utah	1923	109	87,746			57	165,325	166	253,071			923	3,495,059	57		
	1924	115	98,975			75	151,725	190	250,700			859	2,756,103	60		
San Antonio, Tex.	1923	587	184,470			70	259,580	657	444,050	7	925	1,997	4,996,209	44		
	1924							677	345,380	21	3,050	1,962	4,021,156	50		
San Francisco, Calif.	1923	802	969,947			1,610	1,661,389	2,412	2,631,336	544	131,214	5,258	24,030,192	9		
	1924	830	710,230			451	1,350,748	1,281	2,060,978	1,281	150,000	5,343	26,157,670	8		
Scranton, Pa.	1923							276	418,874			716	1,554,275	67		
	1924	50	125,000			44	375,000	94	500,000			576	2,377,196	61		
Seattle, Wash.	1923							2,093	1,661,425	411	1,610	5,815	13,746,318	20		
	1924							1,859	1,641,445			5,318	16,847,455	15		
Spokane, Wash.	1923	458	113,365	1	34,000	94	265,770	553	413,135			1,307	1,505,290	68		
	1924	332	109,566			85	623,775	417	733,341			1,283	1,985,874	65		
Springfield, Mass.	1923							322	777,248			1,299	5,969,138	39		
	1924							268	786,335			1,600	8,069,073	37		
Syracuse, N. Y.	1923	210	200,000			80	77,000	290	277,000			1,469	3,286,500	58	24	48
	1924	532	291,718			121	545,095	653	836,723			1,876	4,372,024	48	51	107
Toledo, Ohio	1923	2,055	444,795			198	1,393,792	2,253	1,838,587			4,307	8,714,362	35	125	267
	1924	992	736,224	22	51,265	74	1,114,170	1,088	1,901,659	84	33,085	3,832	10,048,527	27	132	272
Trenton, N. J.	1923	142	182,248			123	406,572	265	588,820			1,144	3,918,934	53		
	1924	145	89,765			154	481,686	299	571,441			1,274	3,306,896	57		
Washington, D. C.	1923							1,244	2,068,572	1,864	366,492	6,136	31,681,284	6		
	1924							1,348	1,894,518	193	339,482	4,237	21,064,396	10		
Wilmington, Del.	1923	289	205,295			57	208,345	346	413,640	33	20,755	940	1,980,974	64		
	1924	364	261,453			95	235,664	459	497,117	15	4,284	1,083	2,343,927	63		
Worcester, Mass.	1923	276	221,642	4	117,047	239	1,072,885	519	1,411,574			1,419	5,667,698	43		
	1924	317	275,399	2	14,500	283	1,086,375	602	1,376,274			1,673	7,662,680	39		
Yonkers, N. Y.	1923	53	149,200	2	52,000	16	127,100	71	328,000			448	4,882,350	45		
	1924	74	119,300			23	163,800	97	283,100			629	6,283,611	42		
Youngstown, Ohio	1923	112	75,000			52	110,000	164	185,000			1,165	3,153,650	59		
	1924	107	67,000	10	5,000	75	80,000	192	152,000			1,444	4,945,425	47		
Total	1923							92,963	135,822,167	29,950	11,985,707	319,737	1,450,799,823			
	1924							94,895	134,082,824	32,283	13,879,158	338,301	1,552,952,537			

Negro Housing Situation in Baltimore

A STATEMENT issued by the Department of Labor, based on an investigation recently made in Baltimore, indicates that the housing situation for the colored inhabitants of that city is, on the whole, rather favorable. The colored population, numbering 108,322, is being slowly augmented by the arrival of southern migrants, and new sections of the city are being opened to them. Conditions varied widely in different localities.

Small streets and alleys are still, unfortunately, the abiding places of large numbers of colored people of limited means, who are crowded into small dwellings. Yet, with the exception of these small and limited localities, the problem of housing congestion in Baltimore is not a serious one.

A study of houses occupied by colored people in typical Baltimore streets, including both the newly opened sections and those in which they have long dwelt, showed that the majority were two and three story brick structures, containing from 6 to 16 rooms, and ranging up to $10,000 in value. Forty-five per cent of these properties were owned by their occupants who, after buying them had, "where it was necessary," improved them by putting in modern heating appliances, electric lights, hardwood floors, and the like. Rental values ranged from $16 to $80 a month. One very satisfactory feature was that in 40 per cent of the cases considered there was no subletting of rooms, the householder and his immediate family occupying the whole dwelling.

In regard to rents and conveniences, two informants stated that as a rule colored tenants paid higher prices and got poorer shelter and facilities than the whites. The inquiry sustained this charge so far as prices are concerned, these being described as slightly higher for properties occupied by negroes than for similar accommodations provided for white tenants; "but as to general construction and specifications, it is indicated that there is virtually no difference between the facilities available to the two classes of occupants."

In its entirety, the housing situation among the colored people of Baltimore, Md., seems to bear no symptoms of unusual needs, or indicate any crisis of shortage such as has appeared in several other cities. A normal housing adjustment, in keeping with the needs of the city's negro populace, is apparently ever applicable to each individual case, as the necessity arises.

English Housing Progress

THE report of the English Ministry of Health for 1923–24 contains a brief summary of the results achieved under the 1923 housing act. This act was intended to promote the provision of houses by private enterprise, and for this purpose it was stipulated that the subsidy offered by the Government should not be applicable to houses built by local authorities unless the latter could satisfy the Minister of Health that private builders were unable or unwilling to meet the needs of the situation. The subsidy, which was limited to houses of specified size and character, was to be £6 [2] a year for 20 years. Under this act considerable progress was made.

[2] Pound sterling at par=$4.8665; exchange rate varies.

Up to March 31, 1924, 1,170 local authorities had submitted, and the minister had approved, schemes for the erection of 115,636 houses, including 41,859 houses by the local authorities themselves and 73,777 houses by private enterprise. Of the 41,859 houses, contracts have been let for 25,586 houses and of these 3,847 had been completed and 10,183 were under construction at the end of the year under review. As regards the 73,777 houses, undertakings had been given under section 2 (3) of the act of 1923 in respect of 47,230 houses and of these 3,708 had been completed and 19,086 were under construction on March 31.

Schemes comprising 5,681 houses had also been submitted by 10 societies under section 3 of the act and approved by the minister. Of these houses, contracts for 3,575 had been let, 585 had been completed, and 1,136 were under construction on March 31.

The number of houses included in definite arrangements at the end of the year under review was therefore 76,391, and of these 8,140 had been completed and 30,405 were in course of construction.

No information, it is stated, is available as to the cost of houses being put up by private enterprise under the 1923 act. The cost of houses erected by local authorities has risen since the act was adopted. In August, 1923, the average cost for a nonparlor house was £351, and for a parlor house £408; in March, 1924, the figures were, respectively, £416 and £459.

The total number of houses completed under the housing acts of 1919 was 198,183, of which 154,485 had been built by local authorities and county councils. The report includes some figures as to the annual cost to the country of the houses built under the earlier acts, a subject on which there has been much heated debate.

The total annual subsidy for the earlier years in respect of these schemes, including schemes of public utility societies, is estimated at about £8,000,000. The amount of the subsidies paid under this head during 1923–24 were as follows:

To 1,384 local authorities	£7, 464, 381
To 70 public utility societies	282, 916
To 6 housing trusts	13, 577
To 9 county councils	13, 810
Total	7, 774, 684

The report states that during the year covered there has been an increase of interest in both town and regional planning. On March 31, 1924, the number of joint town-planning committees had risen to 25 as compared with 14 at the end of the preceding year.

New English Housing Act

AT ITS recent session Parliament passed an act designed to make it possible, on the financial side, to carry into effect the recommendations of the National House Building Committee, whose report was summarized in the MONTHLY LABOR REVIEW for July 1924 (pp. 185–187). The act, which received the royal assent and became law on August 7, offers a subsidy for houses completed before October 1, 1939, thereby providing for the 15-year program the committee recommended. The subsidy is raised from the present figure of £6 [2] a year for 20 years to £9 a year for 40 years, except in agricultural parishes, where it is to be £12 10s. yearly for 40 years.

[2] Pound sterling at par=$4.8665; exchange rate varies.

It can be claimed only for houses fulfilling certain conditions, of which the most important are thus summarized by the ministry of Labor Gazette in its issue of August, 1924.

That the houses shall be let to tenants who intend to reside therein; and that the said tenants shall not part with the possession of the houses or any part thereof without the consent of the local authority.

That the rents charged shall not, except in certain specified cases, exceed the total amount of the rents that would be payable if the houses were let at the appropriate normal rents charged in respect of working-class houses erected prior to August 3, 1914.

That reasonable preference is given to large families in letting the houses.

Other sections provide that the Minister of Health and the Scottish Board of Health may terminate the subsidy in 1927, or in any third succeding year thereafter:

(a) If the number of houses completed in the two preceding years, and in respect of which the subsidy is payable, is less than two-thirds of the number assigned to those years in a schedule of the act; or

(b) If the cost of erecting houses, in respect of which the subsidy is payable, has become unreasonable.

Other sections require local authorities to take into consideration any town-planning scheme likely to be undertaken in the locality where subsidy houses are to be erected, forbid the erection of more than 12 houses to an acre without special consent from the Minister of Health, provide for purchasing materials in the cheapest market, whether that be at home or abroad, and authorize the minister to reduce the subsidy in the case of a local authority "which refuses without reasonable cause to adopt a new material or method of construction which would reduce the cost of building the houses without unduly affecting their durability, suitability, or appearance."

INDUSTRIAL ACCIDENTS AND HYGIENE

Effect of Hydrofluoric-Acid Fumes

A STATEMENT of the effects upon workers of exposure to hydrofluoric-acid fumes is found in the Industrial Hygiene Bulletin, September, 1924 (p. 10), published by the New York State Department of Labor.

Anhydrous hydrogen fluoride is a clear liquid, boiling at 67° F., which fumes strongly in the air. It is highly poisonous, forming an ulcerated sore if a drop comes in contact with the skin, and accidental breathing of the concentrated vapor of the acid has caused death. Exposure to the fumes produces intense irritation of the eyelids and conjunctiva, coryza, bronchial catarrh with spasmodic cough; ulceration of the nostrils, gums, and oral mucous membrane; painful ulcers of the cuticle, erosion and formation of vesicles, and suppuration under the finger nails.

Hydrofluoric acid is used to produce opaque and transparent etching on glass, and poisoning from it has occurred in chemical works where it is prepared, in glass factories, in laboratories of the pottery industry, in the extraction of fluorides of antimony (substitute for tartar emetic in dye works), in fertilizer factories (extraction of phosphorites for manufacture of phosphorus), in bleaching, and in the extraction of silicates.

To produce opaque etching, the glass is dipped in a solution of hydrofluoric acid, an alkali fluoride, and other salts. If the solution contains too much hydrofluoric acid, the etching is coarse grained and irregular, and if it contains too little acid it is transparent, so that it would appear that the concentration of hydrofluoric acid in the bath is fixed by the degree of opacity required. This, however, is not the case, as the fact that any concentration of pure hydrofluoric acid produces transparent etching is proof that other neutral components of the solution enter into the action in the same way.

A case is cited of a plant manufacturing opaque glassware where such a high percentage of hydrofluoric acid was used in the solution that a dangerous amount of fume was given off. It was obvious that workers who stood constantly over the dipping bath must have been seriously affected, as all the windows of the large room containing the bath were deeply frosted, and the glass front of a large wall clock had been broken out in order to see the hands of the clock. It was admitted by the manufacturer that conditions were bad, but he could see no remedy. It was suggested that the desired degree of opacity might be obtained by decreasing the concentration of hydrofluoric acid in the solution and increasing the concentration of the neutral components. After some experimentation a neutral, water-soluble, viscous substance was discovered which practically eliminated the discharge of hydrofluoric-acid fumes into the room, and in addition to the improved health conditions thereby secured an opaque etching with a finer texture was produced.

Hazards from Electric Sparks and Arcs in Coal Mines

A REPORT on the hazards in coal mines from the use of unsafe electrical equipment, made by L. C. Ilsley, of the United States Bureau of Mines, and issued as serial No. 2626, shows the great loss of life as well as damage to property resulting from the use of "open type" or the "half-safe type" of electrical equipment.

Three accidents within the past six months caused by unsafe equipment resulted in the death of 234 men. An open type of electric coal drill used in a gaseous mine in West Virginia was the probable cause of the death of 27 men; a half-safe type of electric coal-cutting machine in a gaseous mine in Pennsylvania was the probable cause of the loss of 36 lives, and an unapproved, unsafe type of flame safety lamp used in a gaseous and dusty mine in Utah was the alleged cause of the death of 171 men. All of these disasters would, without doubt, have been avoidable if proper equipment had been used. As a result of the accidents more rigid requirements will be enforced in West Virginia; the State mine inspectors' committee in Pennsylvania has made recommendations for improving the conditions in the particular mine in that State in which the accident occurred; and the Industrial Commission of Utah has issued orders against the use of unsafe lamps in that State.

While these acts and recommendations are all good and will help prevent accidents in the future, it is to be regretted that they were not put into effect before instead of after the accidents occurred and that other States fail to take advantage of such warnings and install proper safeguards and equipment in their mines.

There are five general ways in which electric current can cause accidents: (1) By shock to persons; (2) by igniting powder; (3) by igniting gas; (4) by igniting coal dust; (5) by setting fire to inflammable material such as timber and coal. Many of the accidents from these causes could be prevented by the use of approved electrical equipment. By approved equipment is meant apparatus that has been tested and formally approved by the Bureau of Mines. So far as is known at the present time no accidents have been caused by sparks or flashes from equipment approved by the bureau.

An analysis of disasters and fires caused by electrical apparatus and circuits, made from the records of the bureau for the period 1910 to 1924, shows that in 26 accidents reported there were 499 lives lost and 86 men injured, besides the property damage.

Thousands of tests have been conducted by the Bureau of Mines in the past 14 years, in cooperation with manufacturers of electrical apparatus for use in mines, to determine whether a particular device is safe for use in explosive atmospheres. If the device is found to be unsafe the bureau and the manufacturer work together to eliminate the unsafe features, and it is not approved until it can meet the test set by the bureau. The types of equipment approved by the bureau include storage battery locomotives, power trucks, coal drills, short-wall and arc-wall mining machines, lamps, and single-shot blasting units.

Industrial Accidents in Pennsylvania, January to June, 1924

THE following table presents a summary of the accident experience of Pennsylvania during the first six months of 1924:

NUMBER OF FATAL AND NONFATAL ACCIDENTS IN PENNSYLVANIA AND DAYS LOST THEREBY, JANUARY TO JUNE, 1924, BY INDUSTRY AND ACCIDENT CAUSE

Industry

Item	Number of accidents		Days lost [1]	Item	Number of accidents		Days lost [1]
	Fatal	Non-fatal			Fatal	Non-fatal	
Building and contracting	98	6,097	734,501	Anthracite mines	268	15,066	1,870,730
Chemicals	27	1,278	200,434	Bituminous mines	203	12,468	1,528,353
Clay, glass, etc	27	3,075	218,207	Transportation	194	8,615	1,380,782
Clothing	------	775	10,242	Quarries	17	965	121,648
Food products	8	2,006	94,304	Tobacco	------	175	2,486
Leather and rubber goods	4	744	42,561	Miscellaneous industries	19	1,793	153,439
Beverages	4	155	28,256	Mercantile establishments	16	2,183	143,255
Lumber	15	2,107	152,822	Jobbers	4	577	33,567
Paper and printing	7	1,261	70,030	Municipalities	40	1,171	268,654
Textiles	7	1,436	78,001	Hotels and restaurants	7	531	52,451
Laundries	1	115	8,912				
Metals	143	25,083	1,414,881	Total	1,109	88,276	8,608,516

Accident cause

Machinery	38	8,460	588,879	Hand tools	12	8,807	219,987
Boilers	5	98	31,386	Electricity	27	571	177,048
Pumps, etc	3	269	27,061	Explosives	122	898	785,987
Transmission	10	196	70,197	Hot substances	47	3,257	328,579
Elevators	27	395	171,837	Falling objects	56	4,141	403,130
Cranes and derricks	38	1,649	288,602	Falling objects (mines)	216	7,012	1,465,221
Cars and engines	242	10,504	1,773,321	Falls of person	93	9,153	716,090
Motor vehicles	53	2,899	380,311	Stepping on or striking against objects	12	5,151	126,675
Horse vehicles	14	981	102,164	Miscellaneous causes	48	3,305	359,786
Hand trucks	8	2,228	82,293				
Water craft	5	74	31,018				
Handling objects	34	18,228	479,544	Total	1,109	88,276	8,608,516

[1] Weighted according to the scale adopted by the International Association of Industrial Accident Boards and Commissions.

In number of cases the most prolific cause of accident shown is the handling of objects and tools, which was responsible for 27,035 accidents, cars and engines coming next, with 10,504. When, however, severity of accident is considered, cars and engines show a time loss of 1,773,321 days, while handling objects and tools had a time loss of 699,531 days. This illustrates a very common situation, in which precisely opposite conditions are indicated by consideration of accident frequency and severity.

Among the industries metal products had nearly as many accidents as anthracite and bituminous mines combined, but the time loss was less than either of them.

It is of course unfortunate, as the department of labor and industry indicates in giving out these figures, that it has not been possible to determine, at least for some of the important industries, the man-hours of exposure and so make possible the determination of some really comparable accident rates. As it is now, there is no means of knowing whether the variations shown by the tables represent actual variations of hazard or are simply due to the varying size of the industrial groups considered.

Fatal Accidents in Washington Coal Mines, 1914 to 1923

THE following statistics showing fatal coal-mine accidents in Washington State in their relation to coal tonnage and number of men employed for the decade 1914 to 1923 are taken from the second report of the department of labor and industries of that State, July 1, 1922, to December 31, 1923:

MINE FATALITIES AS COMPARED WITH NUMBER OF EMPLOYEES AND PRODUCTION IN WASHINGTON STATE, 1914-1923

Year	Total coal production (short tons)	Total number of employees	Average days in active operation	Fatalities		Production per death (short tons)
				Number	Rate per 1,000 employees	
1914	3,040,361	5,647	200	17	3.01	178,845
1915	2,409,331	4,828	165	45	9.32	53,540
1916	3,019,600	4,746	218	21	4.42	143,790
1917	4,002,759	5,345	271	30	5.61	133,425
1918	4,128,424	5,847	266	34	5.81	121,424
1919	3,059,580	5,005	234	19	3.80	161,030
1920	3,756,881	4,962	262	18	3.63	208,716
1921	2,422,106	4,575	157	7	1.53	346,015
1922	2,601,058	4,681	177	23	4.91	113,089
1923	2,946,007	4,342	175	20	4.61	147,300

Activities of State Accident Board in Finland, 1923 [1]

THE State accident board (*Statens Olycksfallsnämnd*) in Finland deals with compensation for accidents arising in the Government service. In 1923, the sixth year of its operation, the number of accidents increased due to increased activities of the State along industrial lines and new construction on the State railways.

Accidents on the State railways increased from 280 in 1922 to 421 in 1923 or 50.36 per cent, and the amount paid out for pensions and compensation for temporary disability increased from 106,674 marks [2] to 339,629 marks. A still greater increase occurred in accidents among workers in the forestry service, being 321 in 1923 as compared with 166 in 1922, an increase of 93.4 per cent. The amount paid for annual pensions and compensation for temporary disability in this service in 1922 and 1923 was 85,298 and 200,563 marks, respectively. The total number of accidents in 1922 was 594, while in 1923 there were 868, an increase of 46.12 per cent. The total amount paid out in pensions and compensation for temporary disability was 317,857 marks in 1922 and 633,048 marks in 1923, an increase of 315,191 marks, or 99.16 per cent. In 1923 there were 26 appeals as against 35 in 1922, and 40 unsettled cases in 1922 as against 25 in 1923, a reduction of 60 per cent.

[1] Finland. Socialministeriet. Social Tidskrift No. 5, 1924.
[2] Finnish mark at par—19.3 cents; exchange rate varies.

WORKMEN'S COMPENSATION

Review of Workmen's Compensation Legislation for 1924

By LINDLEY D. CLARK, OF THE UNITED STATES BUREAU OF LABOR STATISTICS

OF THE 11 States whose legislatures met in regular session in 1924, 2 are without compensation legislation. Amending acts were reported from 6 of the remainder. The legislative situation in Rhode Island has delayed any report from that State, though a legislative committee was appointed in 1923 to consider the subject of revision and amendment, a report being due in January, 1924. The legislature of Iowa was called in extra session to pass upon the codification of its laws generally, in which the workmen's compensation law was, of course, included. The United States Congress amended the act applicable to Federal employees for the purpose of clarifying a provision as to injuries. The result is changes of greater or less importance in 8 laws, some of the States maintaining their record of amendment at every legislative session since the original enactment.

The present summary is supplemental to the basic volume, Bulletin No. 272, which included the legislation in force at the end of the year 1919. Legislation for the years 1920, 1921 and 1922 was presented in Bulletin No. 332; while the legislation for 1923 was reviewed in the MONTHLY LABOR REVIEW for October, 1923. As in past years, the total result of the amending legislation is to increase the beneficial effect of the laws by enlarging the percentage allowed as compensation, increasing the amount of medical and surgical aid, extending the coverage as to occupations and including occupational diseases, reducing the waiting period, or by clarifying the procedure. Chief attention is here given to substantive changes affecting the amount of benefits, rather than to procedure, although any important change in this field is also noted.

This summary is offered as complete for the year's legislation with the possible exception of Rhode Island where inquiry simply met the reply that reports were not yet available.

Iowa

EXTENSIVE changes in arrangement were made by the judiciary committee in revising the compensation law of this State, though but little alteration was made in the actual provisions of the law. Detailed procedure is prescribed in connection with injuries due to the fault of the third person, the employer being authorized to sue if the employee fails to act within 90 days, any excess recovery over the employer's payment to the employee going to the latter. No settlement may be made between the injured workman and the third party

without the consent of the employer; or, in case of his refusal to act, without the approval of the industrial commissioner.

Claims under the law must be brought within 2 years; unpaid installments bear interest at 6 per cent from their maturity until paid.

As the law formerly stood, the minimum of $6 per week seemed to be absolute in death cases, though in disability in was fixed at actual wages if less than $6 per week. This qualification now applies to all benefits paid.

A nonresident alien beneficiary receives but 50 per cent of the amount to which a resident would be entitled, in the absence of contrary provisions by treaty, the remaining 50 per cent going to the State treasury. If the law of the place of the beneficiary's residence would exclude citizens of the United States from benefits thereunder, then all such beneficiary's share goes to the State treasury.

Details are added to the provisions for commutation to lump-sum payments, partial commutations being also provided for. Where an employer has not rejected the act, but fails to maintain insurance, the employee may either claim compensation or sue at common law with the ordinary defenses abrogated; this provision does not apply to an employer with five or less employees.

Provision is made for the employment of a shorthand reporter in the arbitration of cases and of precedence over other civil business where appeals to the courts are taken. The commissioner is required to make biennial reports. (Committee substitute for House File No. 42.)

Kentucky

OPERATORS of threshing machines used in threshing or hulling grain or seeds are brought within the terms of the compensation law of the State as an exception to its exclusion of agricultural employments. Injuries or death due to the inhalation of noxious gases or smoke in mines or to the inhalation of any kind of gas are made compensable.

Instead of an arbitrary allowance of 26 weeks' compensation in cases of operation for hernia, compensation is to be given for the period of actual disability following an operation.

The status of a minor under 16 years of age, who has procured employment on a parent's or guardian's certificate that he is over 16, is fixed by an amendment which gives him rights under the compensation law and not otherwise. The form of the parent's or guardian's certificate is prescribed; an identification of signature is conclusive as against any claim of unlawful employment. (Senate Bill No. 181.)

Louisiana

THE percentage of wages payable as compensation is advanced from 60 to 65 per cent, and the maximum weekly benefit from $18 to $20. These changes affect disability payments and death benefits alike. There is also an increase in the rates paid to various classes of dependents. The rate of 30 per cent for dependent brothers or sisters is advanced to 32½ for one brother or sister or other dependent member of the family, while additional dependents of this class each receive 11 per cent instead of 10 as formerly. The

widow or widower alone also receives 32½ per cent instead of 30, while with one child the benefit is 46¼ per cent instead of 45, the maximum in all classes of cases being 65 per cent.

An interesting adjustment of partial disability benefits appears in the reduction of the period for the loss of an arm from 200 to 175 weeks, while a reciprocal change is made in the period for the loss of a leg; i. e., an extension from 175 weeks to 200 weeks. No report of discussions is at hand, but it would appear to be a concession to the contention that the loss of a leg is a greater handicap, as a rule, than the loss of an arm. (Acts No. 21, 216.)

Maryland

IN CONTRAST with the Kentucky Legislature in bringing the threshing and hulling of grain within the terms of its statute, an amendment of the Maryland law makes more specific the exclusion of employees engaged in the threshing or harvesting of crops, these being specifically classed as farm laborers. The former exclusion of employees receiving in excess of $2,000 a year is eliminated, no salary exclusion remaining.

Employment by the State is now within the act whether it be for pecuniary gain or otherwise; while the ranking line officer of the State militia is authorized and directed to take out and maintain a policy or policies of insurance for the officers and enlisted men of the State militia.

Whenever the industrial accident commission certifies an employer to be in default in the payment of premiums to the State fund, his policy ceases to be in effect until all premiums are paid.

Traveling salesmen, who are citizens or residents of the State of Maryland, employed by any person, firm, or corporation having a place of business within the State, are entitled to compensation for injuries sustained either within or without the State; but if compensation or damages have been received under the laws of any other State, no total is to be awarded in excess of the amounts provided by the Maryland law.

Medical and surgical aid to the amount of $500 is now to be furnished, instead of $300 as formerly. (Chs. 217, 332, 341, 364, 583.)

New Jersey

A RATHER brief list of occupational diseases is made compensable in cases in which disability has commenced within five months after the termination of exposure. The list includes anthrax, poisoning by lead, mercury, arsenic, phosphorus, benzene and its homologues and derivatives, wood alcohol, chrome poisoning, and caisson disease. Willful self-exposure will bar a claim, and failure or omission to observe the rules promulgated by the department of labor and posted by the employer for the prevention of occupational diseases will be so classed. Claims must be submitted within one year after the employment in which exposure to such diseases occurred has terminated. (Ch. 124.)

Double liability is entailed by the employment of minors under 16 years of age in violation of law or without the proper certificate.

The employer alone is liable for such extra compensation, and no insurance policy undertaking to cover such risk is valid. (Ch. 159.)

Contractors placing work with subcontractors who do not carry insurance are themselves liable to such subcontractors' employees or their dependents, but have a cause of action against the subcontractor for reimbursement, this provision being contained in an amendment to the separate law known as the workmen's compensation insurance act (ch. 178, Acts of 1917, amended, ch. 128, Acts of 1924).

Another act (ch. 187, Acts of 1924) requires reports of accidents and compensable diseases, both immediate and final.

New York

THE compensation act of New York is extended to all employments by the State without regard to definitions or restrictions contained in the act. Increased benefits are allowed in specific cases, the period for the loss of a thumb being extended from 60 to 75 weeks and for the loss of an eye from 128 to 160 weeks. Where permanent partial disability follows a protracted period of temporary total disability the specific compensation period for certain injuries is extended by the number of weeks by which such period of temporary total disability exceeds certain fixed periods. The healing time for an arm, hand, or foot under this provision is 32 weeks; for a leg, 40 weeks; for an eye, 20 weeks; for a thumb, 24 weeks, etc. Other liberalizing provisions are the reduction of the waiting period from 14 to 7 days, and the increase of the maximum wage to be used as the basis in computing death benefits from $125 to $150 per month. (Chs. 317–320, 499, 500, 658.)

Virginia

THE minimum benefit payable in case of disability or death is advanced from $5 to $6 per week. The law of this State omits the usual provision for the payment of full wages where they are less than the minimum prescribed. The "loss of the hearing of an ear" and disfigurement are for the first time made compensable, the former by compensation for 50 weeks and the latter for 60 weeks.

The measure of compensation to partial dependents is now the extent of their dependency in proportion to a total dependency instead of in the ratio of the employee's contributions as compared with his annual earnings.

Burial expenses where there are no dependents may now be as much as $150 instead of $100 as formerly.

A minor illegally employed may now secure compensation for injury, but his parents may also bring a suit for damages for loss of services. The dependency of a female under 18 terminates upon her marriage.

Appeals from the awards of the Industrial Commission are taken directly to the supreme court of appeals of the State instead of to the lower courts as formerly.

Where an owner, by which is meant a person undertaking to perform any work which is a part of his trade or business, makes a contract with any other person for the performance of the whole or part

of such work, the owner is liable for compensation becoming due to the workmen employed by such contractor; contractors are likewise responsible to the employees of subcontractors. In case of payment under these requirements, the owner and contractor are entitled to recoupment from any liable third person, and may also call in the immediate employer as defendant or codefendant.

A physician may not collect fees from the employer or insurance carrier until he has rendered to the commission the reports required by it. (Ch. 318,)

United States

THOUGH the United States Employees' Compensation Commission had from the beginning of the operation of the act of 1916 paid benefits in cases of disability due to disease resulting from employment, a dispute as to the validity of such action led to a statutory declaration by Congress that the term "injury" includes not only injuries by accident, but also "any disease proximately caused by the employment." It was also provided that in the absence of fraud or mistake in mathematical calculations, the findings and decision of the commission on the merits of compensation claims should not, if supported by competent evidence, "be subject to review by any other administrative or accounting officer, employee, or agent of the United States." (Act No. 196.)

Eleventh Annual Meeting of the International Association of Industrial Accident Boards and Commissions

THE eleventh annual meeting of the International Association of Industrial Accident Boards and Commissions was convened in the city of Halifax, Nova Scotia, August 26, 1924. While the attendance was smaller than it might have been at some more central place, there was a satisfactory representation of the various States and Provinces. After addresses of welcome by Premier E. H. Armstrong and Mayor John Murphy, of Halifax, there was a brief address by the president of the association, Fred W. Armstrong. In connection with the secretary's report, a report relative to the experience of the States and Provinces in regard to remarriage of widows was presented, which stated that 24 replies had been received to the questionnaire sent to the various boards and commissions as recommended by the committee on statistics and compensation costs, 5 jurisdictions sending statistics of their experience, and presented a review of the information thereby obtained.

The report of the committee on forms and procedure, read by Miss R. O. Harrison, of the State Industrial Accident Commission of Maryland, presented further suggestions for improvement of workmen's compensation administration and was, after some discussion, adopted and the committee discharged. In a paper on "How Nova Scotia handles its extraterritorial problems," V. J. Paton, chairman of the Workmen's Compensation Board of Nova Scotia, referred to the difficulties in administering compensation acts as regards jurisdiction of longshoremen and railway employees and contrasted the position

of such employees with the compensation acts of the various States of the United States and of Nova Scotia.

The subject of State fund versus competitive insurance, which has been discussed in previous conventions, again received attention, George A. Kingston, commissioner of the Workmen's Compensation Board of Ontario, reading a paper on "What a State fund system is," and William C. Archer, senior referee of the Department of Labor of New York, reading a paper on "What competitive State insurance is."

In the medical session of the convention, held on August 27, a number of medical problems encountered in the administration of compensation laws were discussed by specialists. "Hernia as a workmen's compensation problem" was discussed by Dr. J. G. McDougall, of Halifax, Nova Scotia. Dr. Nelson M. Black, of Milwaukee, presented a résumé of the work done by the committee on compensation for ocular injuries, opthalmic section, American Medical Association, entitled "Compensation for eye injuries." Heretofore compensation for eye injuries has been computed on the visual efficiency of the eye in question and not of the individual. The committee has come to the conclusion that in cases of eye injuries compensation for loss in industrial efficiency should be "that percentage of the compensation provided by law for total permanent disability of both eyes equal to the percentage loss in industrial visual efficiency of the individual." This would "make unnecessary separate provisions for compensation for total disability of one eye and for total disability of both eyes," and the committee advocates changes in the laws to fix compensation for total permanent disability of both eyes only. The subject of back injuries was treated in two papers, "The etiology, diagnosis, and treatment of back pains," by Dr. T. B. Acker, of Halifax, Nova Scotia, and "Spinal hypertrophic arthritis—its relation to compensable injuries," by Dr. W. H. Eager, of Halifax, Nova Scotia, the latter paper illustrated by lantern slides. Joseph A. Parks, member of the Industrial Accident Board of Massachusetts, in discussing "Medical attention in connection with rehabilitation of injured employees," advocated unlimited medical attention. A paper by Dr. Alexander Gibson of Winnipeg, Manitoba, on "Repair of injured tendons, with results," was read by Dr. M. L. Fraser.

At the afternoon session on August 27, the work of the National Association of Legal Aid Organizations was described by John S. Bradway, secretary of that association, following which the convention passed a resolution that a committee of the I. A. I. A. B. C. be appointed to confer with a committee of the National Association of Legal Aid Organizations on mutual problems. At this session a round-table discussion of administrative problems was held, the following topics being considered: "Payment of compensation to alien dependents residing abroad," by William H. Horner, of the Department of Labor and Industry of Pennsylvania; "What New York has done in improving the administration of compensation in 1923," by Richard J. Cullen, deputy industrial commissioner of the Department of Labor of New York; and "Practical administration of permanent partial disability," by L. A. Tarrell, member of Wisconsin Industrial Commission.

The subject of rate making was featured in the closing session on August 28, a paper by T. Norman Dean, statistician of the Workmen's

Compensation Board of Ontario, on "Method of rate making in Canadian Provinces," being read by George A. Kingston, while the method of rate making in exclusive State-fund States was discussed by T. J. Duffy, chairman of the Industrial Commission of Ohio, and the method used in the New York insurance fund was set forth in a paper by Leonard W. Hatch, manager of the State insurance fund, Department of Labor of New York, read by Chas. E. Baldwin, Assistant Commissioner, United States Bureau of Labor Statistics. Andrew F. McBride, Commissioner of the Department of Labor of New Jersey, reviewed briefly the laws of the States as to "Regulations of self-insurers."

Among the resolutions passed by the convention was one that a committee be appointed to consider the question of the preparation of a medical work bearing upon the etiological relation between the trauma and the various known diseases, and one expressing regret at the untimely death of Carl Hookstadt of the United States Bureau of Labor Statistics.

The following officers were elected for the ensuing year:

President.—O. F. McShane, chairman Utah Industrial Commission.

Vice president.—F. M. Williams, chairman Connecticut Board of Compensation Commissioners.

Secretary-treasurer.—Ethelbert Stewart, United States Commissioner of Labor Statistics.

Executive committee.—Ralph Young, deputy commissioner Iowa Workmen's Compensation Service; L. A. Tarrell, member Wisconsin Industrial Commission; W. H. Horner, director Pennsylvania Bureau of Workmen's Compensation; W. C. Archer, senior referee New York Department of Labor; and H. G. Wilson, commissioner Manitoba Workmen's Compensation Board.

The next annual meeting will be held in Salt Lake City, Utah.

Recent Workmen's Compensation Reports

Pennsylvania

THE Department of Labor and Industry of the State of Pennsylvania has undertaken to make a monthly statement of the accidents reported and the days lost to industry by reason of the industrial accidents in the State. On account of the promptness in making such reports lost time will necessarily be estimated, but it is hoped that the figures will be useful in calling attention to the hazards causing the greatest number of accidents.

The initial publication covers the first six months of 1924, during which 89,385 accidents were reported, of which 1,109 were fatal. Comparing the data for the first six months of 1923 with that for 1924, there was a reduction in 1924 of 167 fatal cases and 10,869 nonfatal cases, 11,036 in all. "It is impossible to tell whether this reduction has been due to increased safety activities or a decrease in industrial activity," though it is hoped that the former has been largely instrumental.

The table showing lost time uses the weighted scale recommended by the International Association of Industrial Accident Boards and

Commissions. This scale rates a death at 6,000 days' loss, a permanent total disability the same, loss of an arm above the elbow at 4,500 days, etc. The table shows a loss of 8,608,516 days, which is equivalent to a year's time (300 working-days), each for an army of 28,695 workers.

For the number of accidents occurring in the different industries and the days lost thereby, see page 169.

Wisconsin

THE Industrial Commission of Wisconsin in its May issue of Labor Statistics presents tables showing compensable injuries for which settlement was made during the calendar year 1923. The rapidly mounting number of industrial accidents is noted, but no explanation appears. The total number of industrial injuries reported for 1921, 1922, and 1923 was 16,350, 19,049, and 25,950, respectively. The increases shown exceed the exposure to hazard due to increase of employment, and while they add to the costs of insurance carriers and to the burden on industry, efforts at prevention have thus far failed to secure the desired results.

A table is presented showing compensable injuries, classified by 22 industry groups for 1922 and 1923, the cases considered being those settled during the respective years. Comparing the compensable injuries for 1922 (16,705) with those for 1923 (20,941) an increase of 25.4 per cent is shown. Each of the 22 classes shows an increase, with the exception of cleaning and dyeing, where a reduction of 25.9 per cent is found, and printing and publishing in which there is a reduction of 6.5 per cent. The greatest increases appear in mining, 126.5 per cent; rubber and rubber products, 62.3 per cent; machinery and instruments, 58.5 per cent; and metal and metal products, 48.3 per cent.

The largest number of accidents in 1923 occurred in lumber and lumber products, 3,252 cases, furnishing 15.5 per cent of the total number of injuries for the year and accounting for 16.7 per cent of the working time lost. Construction comes next with 2,993 cases, furnishing 14.2 per cent of the total number and accounting for 18 per cent of the time lost. This latter item shows a severity in excess of the average. The same is true in public utilities and transportation, where 2,104 injuries furnished 10.4 per cent of the total number, but accounted for 13.7 per cent of the total number of days lost.

In all industries, 9,476 workmen working 300 days per year would be required to make up time lost from compensable injuries. In lumber and lumber products 1,580 men would be required to make up the time lost, while in construction the number would be 1,709.

Of the 20,941 compensation cases settled in 1923, 191 were fatal, 4 were permanent total disabilities, and 1,831 permanent partial disabilities. Of the 18,915 temporary injuries, 6,869 lasted from 1 to 2 weeks and 12,046 continued beyond that period. Construction furnished the largest number of deaths (40) and 3 of the 4 cases of permanent total disability. Public utilities and transportation were charged with 38 fatalities, and lumber and lumber products with 31.

Temporary disabilities formed 90.3 per cent of the total, 32.8 per cent lasting from 1 to 2 weeks and 57.5 per cent for over 2 weeks. Exceeding the average (57.5 per cent) for cases causing more than

2 weeks' disability are mining (65.4 per cent), personal and professional service (63.1 per cent), clay, glass, and stone products (62.6 per cent), farming (61.5 per cent), quarrying (61.2 per cent), and construction (61 per cent).

The total number of working-days lost was 2,842,765, and the total amount of compensation paid was $2,794,998, or less than $1 per day. The total amount of medical aid paid, however, added $924,032 to the total relief. The average number of working-days lost per case was 136, the average amount of indemnity paid $133, and the average amount of medical aid, $44. The highest average loss of work time was in farming, 218 days per case in 275 injuries. Public utilities and transportation came next with an average of 186 days per case in 2,104 injuries, ranking with chemicals as to the average number of days lost (186), though in the latter industry there were but 263 cases.

These figures give a general idea of the burden to industry due to industrial accidents, while also indicating the loss to the workman, since his benefits are less than $1 per day as an average for the time lost. As the report states, using construction work as an illustration, the interested parties, contractors and employers, "had no notion at all" as to the amount of working time that is lost by reason of such injuries; while attention is also directed to the burden remaining which is "still borne by injured workmen themselves."

LABOR ORGANIZATIONS AND CONVENTIONS

Biennial Convention of National Women's Trade-Union League [1]

THE National Women's Trade-Union League of America held its ninth biennial convention in New York, June 16–21, 1924. One of the outstanding subjects of discussion was the technique of labor organization, there being considerable protest "against the double standard of efficiency applied to men and women organizers by the men in official places in the labor movement, the double efficiency demanded of women in order to get less than men's recognition."

Among the many decisions of the convention were the following: Continuation of legislative work in various States "for the ratification of the child-labor amendment, for eight-hour laws for women, minimum wage, and restriction of night work, one day rest in seven, exclusive State-fund workmen's compensation, limitation of the use of injunction in labor disputes," and the creation of an international committee of women to make a study of the industrial conditions of the Orient with special reference to women.

Mrs. Maud Swartz was reelected president of the League.

International Sociological Congress [2]

RESOLUTIONS in the labor field, passed by the Third International Sociological Congress held at Rome, April 22–29, 1924, includes the following:

Economic Problems

WITH regard to economic problems the convention placed itself on record as favoring the allowance of greater freedom in directing the flow of immigration, and as urging that cooperative institutions in the different countries unite and make an effort to bring about "international coordination and collaboration."

Social Insurance

TWO resolutions on social insurance advocated—

(1) That social insurance in the various countries be organized in accordance with the standard principles prevailing "in the more civilized countries," and (2) that all governments simplify and coordinate their insurance systems by setting up central schemes covering all risks, yet adaptable to the special legal requirements of different kinds of insurance.

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[1] Life and Labor Bulletin, June, 1924, p. 3, and July, 1924, p. 1.
[2] International Labor Office. Industrial and Labor Information, Geneva, July 21, 1924, pp. 15–17.

International Labor Code

ON THE subject of an international labor code the convention recommended—

(1) That the present international convention "be brought into line and coordinated in the light of general principles elucidated by the comparative study of national legislations," and (2) that in view of the findings of this comparative study an international labor code be formulated "to serve as a model for national legislations without in any way infringing their rights of self-development and adaptation to national requirements."

Unemployment

THE subject of unemployment was dealt with in the following resolution: (1) That unemployment and emigration be studied as correlative problems; (2) that unemployment insurance, and placement work be under the same administrative department; (3) that employers be made responsible for the entire cost of unemployed insurance; (4) that unemployment insurance be organized territorially as well as by industries; (5) that unemployment insurance include intellectual workers; (6) that the "doles" system be abolished and that the practice of "giving work, preferably of urgent public utility, to the unemployed be encouraged and extended"; (7) that remedies used for unemployment be based on accurate statistical data compiled in accordance with uniform principles; and (8) that a study be instituted regarding the effect of "the growth of towns on unemployment."

Domestic Service

IN VIEW of the fact that the dearth of domestic labor, which is seriously disorganizing family and social life, is due to economic, psychological, and economic causes, the congress recommended: (1) That the dignity of domestic workers be raised; (2) that education tend from childhood to make individuals able to meet their own domestic needs; (3) that domestic labor be simplified and expedited by the development of domestic science; and (4) the replacement of the old-fashioned domestic by a higher grade worker who shall be "considered as sharing domestic labor."

Vocational Guidance

VOCATIONAL guidance was touched upon in resolutions urging—

(1) That a plan be worked out, through international collaboration, for the establishment on uniform standards of the mental and physical qualities necessary for different kinds of labor, such standards to be used in vocational guidance and in connection with emigration; and (2) that predominant capacities and technical aptitudes be studied in view of both "sociological distribution and international economy," such sociological distribution to be made the subject of an international investigation.

Intellectual Workers

AS REGARDS intellectual workers, the Congress recommended that these workers be organized in an international confederation closely connected with International Confederation of Manual Workers and having the International Labor Office as a coordinating center, and that an international committee for intellectual collaboration be created under the auspices of the League of Nations and composed of outstanding authors and scholars of different countries.

WORKERS' EDUCATION

Workers' Education in Colorado [1]

AT THE twenty-ninth annual convention of the Colorado State Federation of Labor, held at Pueblo, June 2–5, 1924, the following report by the federation's education committee was adopted:

Labor can function in three directions, in the industrial, political, and cooperative fields, and the success of all efforts depends upon trained leadership. We recommend that the Colorado State Federation of Labor pledge its entire organization to the advancement of workers' education.

We are proud of the fact that through our four labor colleges—at Colorado Springs, Denver, Greeley, and Pueblo—and our Farmer-Labor Summer School—Colorado is placed in the lead in workers' education in America.

We record our appreciation of the fine leadership of our State director of labor education. * * *

We heartily indorse the work of our national organization, the Workers' Education Bureau. * * *

We recommend that our State federation affiliate with this bureau.

We record our appreciation of the experience in workers' education at Brookwood and Bryn Mawr.

To further the development of labor education in Colorado, we recommend:

First. The organization of the Colorado State Workers' Education Bureau.

a. This bureau shall be directed by a committee of five, elected by the State federation of labor.

b. Its executive secretary shall be the State director of labor education.

c. Every union in Colorado is urged to affiliate with this organization at a membership fee of $10 annually.

Second. We recommend the appointment of an educational committee in every union in the State.

a. The report of this committee shall be made a regular order of business in every union meeting.

b. This committee shall act as an agency to enlist as many members as possible in workers' education.

c. These committees shall compose the membership of and be responsible for the State bureau in carrying its program to every last union man in the State.

Third. We recommend this bureau carry out the following program:

a. The organization of labor colleges where population and conditions warrant.

b. The organization of workers' study clubs for small communities and isolated unions.

c. The establishment of a speakers' bureau for labor lyceum courses.

d. The establishment of a State traveling library.

e. The enlargement of the Farmer-Labor Summer School to include all States west of the Mississippi.

We urge every union to pay the expenses of at least one delegate to the summer school at Idaho Springs, August 3–10.

f. The publication of a monthly bulletin for educational committees in local unions.

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[1] Colorado State Federation of Labor. Official proceedings of the twenty-ninth annual convention and the third biennial labor political convention, 1924, p. 74.

Institute for Occupational Advancement in Finland [1]

AS AN outgrowth of a movement for an industrial museum, begun in 1884, an institute for occupational advancement was started in Finland in October, 1921. It is maintained by a foundation formed by Finland's Central Association of Employers, the Finnish Industry Delegations' Central Committee, and Agricultural Producers' Central Association to which many firms contribute, and which receives a State grant. The institute began in 1921 with an agricultural machinery course, adding, in the beginning of 1922, two courses for blacksmiths.

In 1923, six day and four evening courses were given, attended by 272 persons, people from all over the country taking the day courses, while the evening courses were attended almost entirely by Helsingfors people.

In the spring of 1924, nine courses were held, which 473 persons attended.

[1] Finland. Socialministeriet. Social Tidskrift, No. 6, 1924.

STRIKES AND LOCKOUTS

General Strike in Polish Upper Silesia [1]

As a result of the general extension of hours of work in Germany a demand was made at the beginning of July, 1924, by employers in Polish Upper Silesia for the extension of hours of work to 10 per day, the wages to be the same as those paid for the 8-hour day, and the withdrawal of wages in kind paid to the workers. As no agreement could be reached between employers' and workers' organizations, the Government appointed two committees of inquiry, at the request of the workers' organization, to consider the industrial situation. The inquiry brought out the exceptionally serious economic conditions prevailing as a result of the difference in hours of work between German and Polish Upper Silesia and in order to meet this situation and combat unemployment the Polish Government issued a decree on July 18, authorizing the extension of hours of work of workers in the metal industry to a maximum of 10 per day. Protests against the action of the Government were made in the Diet by members of the Socialist and Labor Parties. The Government in explaining its attitude stated that the proposal to lengthen the hours of work for a period of 3 months "in no way modifies the Government's policy, that the social conquests of Polish workers should be maintained in their entirety," and further stated that it was understood that the decree would be immediately repealed in the event of the 8-hour day being reestablished in German Upper Silesia and that there was no question of lengthening hours of work in the rest of the territory of the Republic.

The workers protested vigorously against the decree, in view of the fact that they were also faced with a demand of the mine owners for the extension of hours of work, with the demand of the employers for a 30 per cent reduction in hourly wages, and a demand for the reduction of the wages in kind which had hitherto been paid. Negotiations which were carried on for more than a week failed of result and on July 30 representatives of all the workers' organizations, including the Christian trade-unions, declared a general strike. The strike was complete, the organizations of salaried employees declaring their solidarity with the manual workers' organizations. Altogether the number of strikers was more than 150,000. After negotiations which lasted until August 15, the strike was ended by the acceptance by the Works Councils Congress of the award of the arbitration committee by which the hourly wages of metal workers working 10 hours per day were reduced 20 per cent and working hours in mines were maintained at 8 per day with a 10 per cent reduction in wages.

[1] Industrial and Labor Information, Geneva, August 11, 1924, pp. 9–11, and August 18, 1924, pp. 2, 5, 6.

CONCILIATION AND ARBITRATION

Conciliation Work of the Department of Labor in August, 1924

By Hugh L. Kerwin, Director of Conciliation

THE Secretary of Labor, through the Conciliation Service, exercised his good offices in connection with 21 labor disputes during August, 1924. These disputes affected a known total of 29,317 employees. The table following shows the name and location of the establishment or industry in which the dispute occurred, the nature of the dispute (whether strike or lockout or controversy not having reached strike or lockout stage), the craft or trade concerned, the cause of the dispute, its present status, the terms of settlement, the date of beginning and ending, and the number of workmen directly and indirectly affected.

On September 1, 1924, there were 45 strikes before the department for settlement and, in addition, 14 controversies which had not reached the strike stage. Total number of cases pending, 59.

LABOR DISPUTES HANDLED BY THE UNITED STATES DEPARTMENT OF LABOR THROUGH ITS CONCILIATION SERVICE, AUGUST, 1924

Company or industry and location	Nature of controversy	Craft concerned	Cause of dispute	Present status and terms of settlement	Duration		Men involved	
					Beginning	Ending	Directly	Indirectly
Shell Oil Co., California	Controversy	Oil workers	Renewal of agreement	Adjusted. Agreement extended one year without change.	1924 July 7	1924 Aug. 11	4,000	1,000
Clothing workers, Baltimore, Md	Strike	Clothing workers	Asked New York scale of wages.	Pending	(1)			
Greenport Brick Co., Hudson, N. J	do	Brickmakers	(1)	do	(1)			
Bethlehem Shipbuilding Corp., Los Angeles, Calif.	do	Boiler makers	Change in hours	Unclassified. Settled before arrival of commissioner.	June 1		33	
Silk manufacturers, Paterson, N. J	do	Silk weavers	44-hour week, increase in wages, and 2-loom system asked by workers.	Pending	Aug. 12		13,400	
Clothing workers, Boston, Mass	do	Clothing workers	Organization of unions	do	(1)		4,000	
Roxbury Carpet Co., Saxonville, Mass.	do	Textile workers	Wage cut of 15 per cent; change of system.	do	July 16		450	575
Watch case manufacturers, Sag Harbor, N. Y.	do	Watchmakers	Wage reduction of 8 to 10 per cent.	Adjusted. Reduction accepted with readjustments in scale.	Aug. 11	Aug. 21	300	150
American Waltham Watch Co., Waltham, Mass.	do	do	Wage reduction of 10 to 25 per cent.	Pending	do		2,800	
Electricians, Allentown, Pa	do	Electricians	(1)	do	(1)		(1)	
Wm. Bornstein, Allentown, Pa	do	Plumbers	Open shop; nonunion labor.	Unable to adjust. All efforts at adjustment unsuccessful.	Aug. 28	Aug. 29	14	
Minton Lumber Co., Mountain View, Calif.	do	Lumbermen	Closed shop, wages, and conditions.	Pending	Aug. 5		75	
Warren Woolen Mills, Stafford, Conn.	do	Textile workers	Dye workers asked 10 per cent increase.	Adjusted. Refused demand; men returned at former wages.	Aug. 7	Aug. 25	10	
Western Steel Car Co., Chicago, Ill	do	Steel workers	Asked increase	Adjusted. Workers returned at same rate of wages.	July 9	do	184	
Clothing workers, Belleville, Ill	do	Clothing workers	Open shop, wages, and recognition.	Pending	(1)		50	
Duplan Silk Mill, Nanticoke, Pa	Controversy	Textile workers	Asked wage increase	Adjusted. Discharged men reemployed; hours adjusted.	(1)	Aug. 23	496	
Marble setters' helpers, Philadelphia, Pa.	Strike	Marble setters	Asked 15 cents per hour increase.	Adjusted. Dispute to be settled by arbitration.	Aug. 17	Aug. 21	300	
Nanticoke Silk Throwing Co., Nanticoke, Pa.	do	Silk weavers	Asked increase in wages	Adjusted. Returned. Wages to be settled later.	Aug. 22	Aug. 23	80	5
Building trades, Belleville, Ill	do	Bricklayers	Asked 25 cents per hour increase—$1.75.	Adjusted. Compromised on 12½ cents per hour increase.	(1)	Aug. 28	45	1,000
E. J. Smith, Boston, Mass	do	Clothing	Demand for union recognition.	Adjusted. Recognition granted	Aug. 11	Aug. 18	150	
High school building, Indianapolis, Ind.	Controversy	Building trades	Jurisdictional dispute	Adjusted. Satisfactory adjustment of dispute.	Aug. 16	Aug. 20	200	
Total							26,587	2,730

[1] Not reported.

IMMIGRATION

Statistics of Immigration for July, 1924

By W. W. Husband, Commissioner General of Immigration

THE following tables show the total number of immigrant aliens admitted into the United States and emigrant aliens departed from the United States during July, 1924, and from July, 1923, to June, 1924. The tabulations are presented according to the countries of last permanent or future permanent residence, races or peoples, occupations, and States of future permanent or last permanent residence. The last table (Table 7) shows the number of aliens admitted under the immigration act of 1924 during the month of July, 1924.

TABLE 1.—INWARD AND OUTWARD PASSENGER MOVEMENT, JULY, 1924, AND FROM JULY, 1923, TO JUNE, 1924

During—	Arrivals					Departures			
	Immigrant aliens admitted	Non-immigrant aliens admitted	United States citizens arrived	Aliens debarred	Total arrivals	Emigrant aliens	Non-emigrant aliens	United States citizens	Total departures
Fiscal year, 1924	706,896	172,406	301,281	30,284	1,210,867	76,789	139,956	277,850	494,595
July, 1924	11,661	11,112	20,927	1,929	45,629	8,493	15,747	43,812	68,052

TABLE 2.—LAST PERMANENT RESIDENCE OF IMMIGRANT ALIENS ADMITTED TO AND FUTURE PERMANENT RESIDENCE OF EMIGRANT ALIENS DEPARTED FROM THE UNITED STATES DURING JULY, 1924, AND FROM JULY, 1923, TO JUNE, 1924, BY COUNTRIES

Country	Immigrant		Emigrant	
	Fiscal year 1924	July, 1924	Fiscal year 1924	July, 1924
Albania	250	1	284	16
Austria	7,505	8	217	64
Belgium	2,065	19	517	61
Bulgaria	550	3	233	20
Czechoslovakia	13,554	14	1,568	387
Denmark	5,281	10	510	12
Esthonia	765	10	11	----------
Finland	3,662	11	360	41
France, including Corsica	6,387	59	1,249	130
Germany	75,091	66	1,178	119
Great Britain, Ireland:				
England	24,466	232	4,361	704
Ireland	17,111	29	1,282	181
Scotland	33,471	60	827	128
Wales	1,553	31	60	5
Greece	4,871	25	7,250	875
Hungary	5,806	12	522	85

TABLE 2.—LAST PERMANENT RESIDENCE OF IMMIGRANT ALIENS ADMITTED TO AND FUTURE PERMANENT RESIDENCE OF EMIGRANT ALIENS DEPARTED FROM THE UNITED STATES DURING JULY, 1924, AND FROM JULY, 1923, TO JUNE, 1924, BY COUNTRIES—Concluded

Country	Immigrant		Emigrant	
	Fiscal year 1924	July, 1924	Fiscal year 1924	July, 1924
Italy, including Sicily and Sardinia	56,246	185	22,904	2,002
Latvia	1,473	----------	67	7
Lithuania	2,369	10	335	77
Netherlands	3,783	7	345	36
Norway	11,986	27	955	101
Poland	28,806	40	2,594	419
Portugal, including Azores and Cape Verde Islands	2,769	9	3,357	286
Rumania	11,142	27	1,096	173
Russia	12,649	16	572	33
Spain, including Canary and Balearic Islands	932	18	2,967	648
Sweden	18,310	11	830	85
Switzerland	3,842	13	390	59
Turkey in Europe	1,481	6	128	26
Yugoslavia	5,835	13	1,991	320
Other Europe	328	----------	28	24
Total Europe	364,339	972	58,988	7,121
China	6,992	285	3,847	282
India	183	2	161	4
Japan	8,801	214	2,155	93
Syria, Palestine, and Mesopotamia	2,946	27	492	49
Turkey in Asia	2,820	3	211	----------
Other Asia	323	9	77	29
Total Asia	22,065	540	6,943	457
Africa	900	9	108	25
Australia, Tasmania, and New Zealand	635	8	485	38
Pacific Islands (not specified)	44	----------	34	4
Total Africa, Australia, and Pacific Islands	1,579	17	627	67
Canada and Newfoundland	200,690	7,814	2,601	199
Central America	2,000	85	567	70
Mexico	89,336	2,001	1,926	116
South America	9,270	101	1,052	96
West Indies	17,559	131	4,081	367
Other countries	58	----------	4	----------
Total Western Hemisphere	318,913	10,132	10,231	848
Grand total	706,896	11,661	76,789	8,493

TABLE 3.—IMMIGRANT ALIENS ADMITTED TO AND EMIGRANT ALIENS DEPARTED FROM THE UNITED STATES DURING JULY, 1924, AND FROM JULY, 1923, TO JUNE, 1924, BY RACES OR PEOPLES

Race or people	Immigrant		Emigrant	
	Fiscal year 1924	July, 1924	Fiscal year 1924	July, 1924
African (black)	12,243	84	1,449	141
Armenian	2,940	20	60	12
Bohemian and Moravian (Czech)	6,869	21	1,287	237
Bulgarian, Serbian, and Montenegrin	2,482	10	1,544	85
Chinese	4,670	278	3,736	280
Croatian and Slovenian	4,137	6	381	205
Cuban	1,412	52	961	98
Dalmatian, Bosnian, and Herzegovinian	295	2	183	49
Dutch and Flemish	7,840	113	990	79
East Indian	154	4	149	5
English	93,939	3,144	6,505	776
Finnish	3,975	24	411	40
French	48,632	1,398	1,305	139
German	95,627	381	1,832	218
Greek	5,252	20	7,335	886
Hebrew	49,989	477	260	45

TABLE 3.—IMMIGRANT ALIENS ADMITTED TO AND EMIGRANT ALIENS DEPARTED FROM THE UNITED STATES DURING JULY, 1924, AND FROM JULY, 1923, TO JUNE 1924, BY RACES OR PEOPLES—Concluded

Race or people	Immigrant		Emigrant	
	Fiscal year 1924	July, 1924	Fiscal year 1924	July, 1924
Irish	42,364	1,080	1,581	254
Italian (north)	11,576	51	2,704	403
Italian (south)	47,633	196	20,363	1,623
Japanese	8,481	206	2,120	89
Korean	122	1	27	
Lithuanian	1,901	5	381	84
Magyar	7,446	33	587	101
Mexican	87,648	1,935	1,878	129
Pacific Islander	12		1	3
Polish	19,371	107	2,590	414
Portuguese	3,892	12	3,465	306
Rumanian	1,727	40	1,085	160
Russian	9,531	62	734	70
Ruthenian (Russniak)	2,356	59	52	7
Scandinavian (Norwegians, Danes, and Swedes)	40,978	224	2,662	221
Scotch	61,327	1,290	1,281	183
Slovak	5,523	6	475	165
Spanish	3,664	41	3,674	714
Spanish American	3,065	141	906	88
Syrian	1,595	28	439	46
Turkish	355	3	297	28
Welsh	2,635	59	77	11
West Indian (except Cuban)	2,211	22	600	56
Other peoples	937	26	422	43
Total	706,896	11,661	76,789	8,493
Male	423,186	6,559	57,313	5,974
Female	283,710	5,102	19,476	2,519

TABLE 4.—IMMIGRANT ALIENS ADMITTED TO AND EMIGRANT ALIENS DEPARTED FROM THE UNITED STATES DURING JULY, 1924, AND FROM JULY, 1923, TO JUNE, 1924, BY STATES OR TERRITORIES

State	Immigrant		Emigrant	
	Fiscal year 1924	July, 1924	Fiscal year 1924	July, 1924
Alabama	438	1	53	14
Alaska	287	2	65	12
Arizona	12,620	250	439	28
Arkansas	165	7	21	
California	57,946	1,284	6,008	433
Colorado	1,657	22	182	14
Connecticut	12,833	133	1,478	131
Delaware	451	7	25	16
District of Columbia	1,504	35	225	1
Florida	4,047	78	1,705	153
Georgia	417	3	78	6
Hawaii	3,186	159	451	17
Idaho	1,118	7	109	3
Illinois	46,254	561	3,977	486
Indiana	5,311	74	633	100
Iowa	3,757	41	253	14
Kansas	1,582	21	101	19
Kentucky	559	8	47	13
Louisiana	1,365	33	457	66
Maine	12,541	436	100	4
Maryland	3,009	16	265	41
Massachusetts	61,938	1,492	6,715	793
Michigan	60,482	1,736	2,624	393
Minnesota	10,795	283	640	39
Mississippi	475	3	47	7
Missouri	4,435	39	423	39
Montana	1,956	26	178	12
Nebraska	2,495	11	145	7
Nevada	261	3	53	5
New Hampshire	7,140	238	132	15
New Jersey	30,803	186	2,909	343
New Mexico	1,364	18	52	9

TABLE 4.—IMMIGRANT ALIENS ADMITTED TO AND EMIGRANT ALIENS DEPARTED FROM THE UNITED STATES DURING JULY, 1924, AND FROM JULY, 1923, TO JUNE, 1924, BY STATES OR TERRITORIES—Concluded

State	Immigrant		Emigrant	
	Fiscal year 1924	July, 1924	Fiscal year 1924	July, 1924
New York	166,749	2,134	28,983	3,262
North Carolina	270	4	79	11
North Dakota	1,745	52	112	2
Ohio	24,154	256	3,423	488
Oklahoma	519	13	42	
Oregon	6,820	30	398	43
Pennsylvania	47,344	307	7,014	977
Philippine Islands	1			
Porto Rico	266	9	183	28
Rhode Island	7,707	73	1,282	38
South Carolina	150	5	24	2
South Dakota	1,016	17	66	7
Tennessee	391	9	45	3
Texas	57,016	1,089	1,033	87
Utah	1,181	5	301	25
Vermont	3,251	197	58	3
Virginia	2,185	12	188	11
Virgin Islands	15			
Washington	20,915	82	1,526	107
West Virginia	2,061	15	712	90
Wisconsin	9,324	130	610	73
Wyoming	625	9	120	2
Total	706,896	11,661	76,789	8,493

TABLE 5.—IMMIGRANT ALIENS ADMITTED TO AND EMIGRANT ALIENS DEPARTED FROM THE UNITED STATES DURING JULY, 1924, AND FROM JULY, 1923, TO JUNE, 1924, BY OCCUPATION

Occupation	Immigrant		Emigrant	
	Fiscal year 1924	July, 1924	Fiscal year 1924	July, 1924
Professional:				
Actors	1,012	17	89	22
Architects	447	4	18	3
Clergy	2,093	70	342	40
Editors	56	3	9	1
Electricians	3,777	50	64	5
Engineers (professional)	4,870	62	295	28
Lawyers	233	8	43	1
Literary and scientific persons	712	9	86	10
Musicians	1,479	25	95	13
Officials (Government)	553	25	156	17
Physicians	1,391	56	87	14
Sculptors and artists	429	8	59	22
Teachers	3,460	111	252	43
Other professional	4,266	101	411	66
Total	24,778	549	2,006	285
Skilled:				
Bakers	3,521	23	202	10
Barbers and hairdressers	2,621	31	221	25
Blacksmiths	3,233	20	79	14
Bookbinders	275		2	
Brewers	34		1	
Butchers	2,795	28	106	14
Cabinetmakers	487	7	46	7
Carpenters and joiners	16,420	247	592	50
Cigarette makers	48	2	2	
Cigar makers	267	6	332	21
Cigar packers	20		1	
Clerks and accountants	25,194	517	985	102
Dressmakers	3,904	38	156	28
Engineers (locomotive, marine, and stationary)	3,421	32	96	13
Furriers and fur workers	320	8	17	2
Gardeners	1,230	13	98	9
Hat and cap makers	303	1	4	

TABLE 5.—IMMIGRANT ALIENS ADMITTED TO AND EMIGRANT ALIENS DEPARTED FROM THE UNITED STATES DURING JULY, 1924, AND FROM JULY, 1923, TO JUNE, 1924, BY OCCUPATION—Concluded

Occupation	Immigrant		Emigrant	
	Fiscal year 1924	July, 1924	Fiscal year 1924	July, 1924
Skilled—Concluded.				
Iron and steel workers	7,308	27	126	14
Jewelers	482	6	31	3
Locksmiths	3,701	1	3	
Machinists	6,616	92	271	55
Mariners	8,571	40	323	24
Masons	5,452	44	163	8
Mechanics (not specified)	8,388	119	265	39
Metal workers (other than iron, steel, and tin)	1,123	12	25	2
Millers	525	2	77	
Milliners	662	14	9	3
Miners	7,001	56	954	113
Painters and glaziers	3,937	71	132	11
Pattern makers	339	4	5	1
Photographers	478	6	15	3
Plasterers	769	52	27	4
Plumbers	2,080	42	58	2
Printers	1,740	25	58	3
Saddlers and harnessmakers	322	1	1	
Seamstresses	2,579	22	61	6
Shoemakers	4,694	37	328	42
Stokers	968	12	26	3
Stonecutters	560	5	19	
Tailors	6,754	43	362	60
Tanners and curriers	182		5	
Textile workers (not specified)	482	5	133	38
Tinners	739	13	8	5
Tobacco workers	30		1	1
Upholsterers	374	2	12	1
Watch and clock makers	528	4	12	2
Weavers and spinners	2,713	11	424	33
Wheelwrights	130		1	
Woodworkers (not specified)	498	16	5	
Other skilled	5,876	54	198	16
Total	150,694	1,836	7,078	787
Miscellaneous:				
Agents	2,179	96	170	31
Bankers	180	5	88	7
Draymen, hackmen, and teamsters	1,770	13	57	1
Farm laborers	27,492	336	259	22
Farmers	20,320	597	1,575	133
Fishermen	3,113	78	82	14
Hotel keepers	225	1	39	8
Laborers	108,001	1,080	37,259	3,918
Manufacturers	525	19	84	6
Merchants and dealers	11,390	227	2,567	232
Servants	51,680	307	2,659	385
Other miscellaneous	26,640	907	3,638	339
Total	253,515	3,666	48,477	5,096
No occupation (including women and children)	277,909	5,640	19,228	2,325
Grand total	706,896	11,661	76,789	8,493

TABLE 6.—ALL CLASSES OF ALIENS ADMITTED, DEPARTED, DEBARRED, AND DEPORTED, AND UNITED STATES CITIZENS ARRIVED AND DEPARTED, DURING JULY, 1924, BY PORTS

Port	Arrivals				Departures			
	Immigrant aliens	Nonimmigrant aliens	United States citizens	Aliens debarred	Emigrant aliens	Nonemigrant aliens	United States citizens	Aliens deported
Atlantic ports:								
New York, N. Y.	1,143	6,602	15,052	485	6,647	11,376	38,566	124
Boston, Mass.	32	189	506	19	468	274	1,198	18
Philadelphia, Pa.	2	14	560	11	99	18	663	3
Baltimore, Md.	9	4	10	4		1		1
Canadian Atlantic	34	197	603	7	234	543	22	17
Portland, Me.		2						
New Bedford, Mass.		4	2					
Providence, R. I.	36	6	1	12	68	11	45	4
Newport News, Va.								
Norfolk, Va.	4		185	9				1
Savannah, Ga.								
Miami, Fla.	2	71	121	2	77	229	127	1
Key West, Fla.	8	874	930	10	78	452	642	1
Other Atlantic	1	2		1				20
Ports of Gulf of Mexico:								
Tampa, Fla.	9	102	11	5	3	23	3	1
Pensacola, Fla.								
Mobile, Ala.		3	19				2	1
New Orleans, La.	37	299	538	27	94	178	482	5
Galveston, Tex.		10	56	8	2	8	34	
Other Gulf								2
Pacific ports:								
San Francisco, Calif.	215	382	444	34	202	425	369	7
Portland, Oreg.					1	12	1	4
Seattle, Wash.	159	166	255	43	152	152	167	8
Canadian Pacific	24	282	318	30	57	146	87	
Alaska	2	14	8	20	10		2	1
Border stations:								
Canadian border	7,825	469	678	1,087	112	1,374	823	167
Mexican border	1,932	1,058	97	98	83	128	26	217
Mexican border seaports	18	76	57	13	62	202	238	1
Insular possessions:								
Honolulu, Hawaii	159	186	146	2	17	85	81	
Porto Rico	10	100	330	2	27	110	234	2
Total	11,661	11,112	20,927	1,929	8,493	15,747	43,812	606

TABLE 7.—ALIENS ADMITTED TO THE UNITED STATES DURING THE MONTH OF JULY, 1924, UNDER THE IMMIGRATION ACT OF 1924, BY COUNTRY OR AREA OF BIRTH

Country or area of birth	Annual quota	Number admitted			Total
		Charged to quota	Not charged to quota		
			Nonquota (sec. 4)	Nonimmigrant (sec. 3)	
Quota countries					
Afghanistan	100			1	1
Albania	100		20	1	21
Andorra	100		1		1
Arabian peninsula	100			1	1
Armenia	124		5	1	6
Australia	121	2	15	226	243
Austria	785	1	19	23	43
Belgium [1]	512	6	55	31	92
Bhutan	100				
Bulgaria	100		4	1	5
Cameroon (British)	100		2	1	3
Cameroon (French)	100				
China	100		180	605	785
Czechoslovakia	3,073	3	40	20	63
Danzig	228		1		1
Denmark	2,789	4	29	91	124
Egypt	100		4	9	13

[1] Including colonies, dependencies, or protectorates of this country.

TABLE 7.—ALIENS ADMITTED TO THE UNITED STATES DURING THE MONTH OF JULY, 1924, UNDER THE IMMIGRATION ACT OF 1924, BY COUNTRY OR AREA OF BIRTH—Concluded

Country or area of birth	Annual quota	Number admitted			Total
		Charged to quota	Not charged to quota		
			Nonquota (sec. 4)	Nonimmigrant (sec. 3)	
Quota countries—Concluded					
Esthonia	124			1	1
Ethiopia (Abyssinia)	100				
Finland	471	2	15	6	23
France [1]	3,954	35	119	226	380
Germany	51,227	21	163	320	504
Great Britain and Northern Ireland [1]	34,007	390	702	1,673	2,765
Greece	100		55	39	94
Hungary	473	2	21	3	26
Iceland	100			1	1
India	100	1	7	38	46
Iraq (Mesopotamia)	100			1	1
Irish Free State	28,567	41	137	88	266
Italy [1]	3,845	9	607	195	811
Japan	100		70	115	185
Latvia	142		16	18	34
Liberia	100		1		1
Liechtenstein	100				
Lithuania	344		21	9	30
Luxemburg	100		1		1
Monaco	100			1	1
Morocco	100		2	4	6
Muscat (Oman)	100			1	1
Nauru (British)	100				
Nepal	100				
Netherlands [1]	1,648	5	56	103	164
New Zealand	100		4	113	117
New Guinea	100				
Norway	6,453	26	45	132	203
Palestine	100		10	9	19
Persia	100		4		4
Poland	5,982	4	62	52	118
Portugal [1]	503		25	15	40
Ruanda and Urandi	100				
Rumania	603	1	27	13	41
Russia, European and Asiatic	2,248	3	35	89	127
Samoa, Western	100				
San Marino	100				
Siam	100			1	1
South Africa	100	3	1	21	25
South West Africa	100		1	2	3
Spain [1]	131	4	129	270	403
Sweden	9,561	12	74	64	150
Switzerland	2,081	4	59	63	126
Syria and The Lebanon	100	3	13	45	61
Tanganyika	100				
Togoland (British)	100				
Togoland (French)	100			1	1
Turkey	100	2	26	19	47
Yap and other Pacific Islands	100				
Yugoslavia	671	1	21	13	35
Total	164,667	585	2,904	4,775	8,264
Nonquota countries					
Canada			8,145	3	8,148
Newfoundland			122		122
Mexico			3,045		3,045
Cuba			1,489		1,489
Dominican Republic			105		105
Haiti			32		32
Canal Zone			19		19
Independent countries of Central and South America			665		665
Total			13,622	3	13,625
Grand total	164,667	585	16,526	4,778	[2] 21,889

[1] Including colonies, dependencies, or protectorates of this country.

[2] Does not include 884 aliens, who arrived prior to the close of June 30, 1924, and admitted during the month of July, 1924.

International Conference on Emigration and Immigration.[1]

AN INTERNATIONAL Emigration and Immigration Conference was held in Rome, May 15 to 31, 1924, at the invitation of the Italian Government. Delegates from 59 States and from the League of Nations and International Labor Office were in attendance.

In his address at the first session the Italian Prime Minister declared that—

> Exchange of labor was at present more than ever an economic necessity. It was one of the most potent human factors in the spiritual rapprochement of peoples and in the reestablishment of the equilibrium of production. The time was therefore ripe for adding to those economic agreements which regulated the exchange of wealth agreements for the international protection of workers.

The chairman of the Governing Body of the International Labor Office emphasized the present paramount importance of the numerous political problems raised by the question of migration and stated that the more successful the conference was in solving such problems the greater would be the energy with which the International Labor Office could do its work.

The wide scope of the conference is indicated by the variety in the subject matter of the resolutions of the four different sections.

The transport and hygiene section adopted resolutions favoring—

> The compilation of an international sanitary code, insurance of emigrants against the risks of the voyage, a thorough medical inspection before departure, giving information concerning personal hygiene, mutual acceptance of vaccination certificates, bilateral agreements concerning railway facilities, laying down minimum requirements for emigrant ships, providing a satisfactory health and sanitary organization at ports of embarkation, avoiding duplication of inspectors on board ship, equality of treatment of different nationalities on board ship, special assistance for women and children, exchange of information concerning emigrant children, enabling emigrants to make complaints to the captain, and assistance for emigrants in countries of transit.

The recommendations made by the section on emigrant aid were as follows:

> Hostels at frontier stations, State supervision of emigrants' lodging houses, provision for emigrants to apply to consuls of other nationalities if no consul of their own nationality is available, post cards at reduced rates for emigrants, compulsory deductions from wages for the maintenance of families left in the emigration country, international assistance for war invalids, official information offices, State regulation of agents, associations for assisting immigrants, the publication of an emigrants' code, the participation of immigrants in cooperative societ and facilitating the giving of legal assistance to immigrants.

The subjects of the resolutions of the section on immigration and the demand for labor in foreign countries are given below:

> Undesirable emigrants, simplification of passport formalities, State supervision of contracts providing for deductions from wages, the exchange of skilled workers, emigration of intellectual workers, respect for the religions and traditions of immigrants, principles which should underlie labor contracts, exchange of demographical information, regulations for the recruiting of bodies of workers, exchange of information concerning the conditions of the labor market in the countries concerned, identity cards for emigrants, the international coordination of statistics, and measures against secret emigration.

[1] International Labor Office. Industrial and Labor Information, May 26 (pp. 22-24) and June 16, 1924 (pp. 11-12), Geneva.

The section on the principles of international agreements proposed resolutions concerning—

The definition of the terms "emigrant" and "immigrant," the principles of an emigrant's charter, the principles of international agreements concerning settlement, equality of treatment concerning workmen's compensation for industrial accidents, agreements for the continuation of an emigrant's right to the benefits of social insurance, cooperation of administrative services for the payment of pensions under social insurance laws to beneficiaries residing abroad, and admission of foreign workers to conciliation and arbitration committees.

A recommendation was approved at the final session for the holding of a second conference in 1927 in an "immigration country," the directing committee of the first conference to prepare for the proposed meeting, and Rome to be the headquarters for such preparations.

FACTORY INSPECTION

Kentucky [1]

WITH respect to employers who violate labor laws it is the practice in Kentucky first to advise them of such infractions and then to allow a reasonable period in which to comply with the provisions they have failed to follow. The inspector has called a second time and in some cases a third time on these employers and has prosecuted only in instances where lawless intention was apparent. The greater number of violators have promptly and gladly conformed with the law, and "a fine spirit of cooperation has thus been developed." Labor conditions, especially for woman wage earners have been improved as a result of the inspection work of the State bureau of labor.

Among the recommendations made by the inspection service to the commissioner of labor are: That an act be passed by the bureau providing for two additional labor inspectors for work among establishments employing women and children; that the salaries of labor inspectors be raised to $1,800 per annum and of assistant labor inspectors to $1,500 per annum, with necessary traveling expenses for both classes of these officials; and that a penalty be provided under the law "for refusal to give statistical information to inspectors."

New York

THE following statistics on factory inspection in New York for the two fiscal years ending, respectively, June 30, 1923, and June 30, 1924, are taken from The Industrial Bulletin of July, 1924, published by the industrial commissioner of that State.

[1] Kentucky. Bureau of Agriculture, Labor, and Statistics. Tenth biennial report, 1920–1921, and eleventh biennial report, 1922–1923. Frankfort, 1924, pp. 8–9.

INSPECTION WORK IN NEW YORK STATE FROM JULY 1, 1922, TO JUNE 30, 1923, AND FROM JULY 1, 1923, TO JUNE 30, 1924

Item	1922–23	1923–24	Item	1922–23	1923–24
Factories:			**Boilers:**		
Regular inspections	61,807	63,163	Regular inspections	3,470	4,461
Building surveys	12,239	45,325	Compliance visits	450	943
Special inspections	11,802	30,955	Boiler certificates issued	3,230	3,975
Complaints investigated	794	676	Information and office calls	1,869	2,398
Special investigations	2,333	3,156	**Industrial hygiene:**		
Compliance visits	80,791	78,958	Physical examinations	[2] 304	[2] 606
Department office calls	3,228	3,684	Trade disease investigations	18	2
Information calls [1]	43,788	56,615	Special inspections	1	
Mercantile establishments:			Special investigations	2,331	4,021
Regular inspections	59,061	83,969	Research investigations	878	1,663
Special inspections	5,126	5,253	Special details	766	1,422
Complaints investigated	862	970	Complaints investigated		5
Compliance visits	33,783	37,076	Information and office calls	994	2,372
Tenements:			**Building construction:**		
Inspection of apartments	220,330	310,374	Regular inspections		4,769
Inspections, licensed buildings	20,482	27,765	Special inspections		203
Inspections, unlicensed buildings	3,576	4,603	Complaints investigated		5
Complaints investigated	224	377	Compliance visits		4,889
Compliance visits	6,169	7,735	**Mines, quarries, magazines, tunnels, and caissons:**		
Department office calls	113	151	Mine inspections	39	36
Licenses—			Quarry inspections	157	178
Issued	1,383	2,518	Magazine inspections	1,252	1,340
Canceled or revoked	2,271	1,153	Tunnel inspections	28	33
Factory permits—			Factory inspections connected with mines and quarries	44	3
Issued	151	325	Special inspections	52	92
Canceled or revoked	182	956	Special investigations	37	47
			Compliance visits	370	341
			Complaints investigated		2
			Information and office calls	505	523

[1] Include visits to nonmanufacturing establishments found in buildings apparently used for factory purposes.
[2] Number of employees.

A summary of the orders, compliances, and prosecutions for the same two years is given below:

NEW YORK STATE BUREAU OF INSPECTION REPORT ON ORDERS, COMPLIANCES, AND PROSECUTIONS, 1922–23 AND 1923–24

	1922–23		1923–24		Prosecutions begun	
	Orders	Compliances	Orders	Compliances	1922–23	1923–24
Factory	129,812	130,350	182,483	177,170	705	1,650
Mercantile	78,761	82,012	143,162	143,055	322	746
Licensed tenement	2,021	2,079	2,059	2,199	14	71
Tunnel and caisson	22	21	21	31		
Boiler	1,878	1,761	2,298	2,449		4
Building construction			9,483	8,837		4
Mine, quarry, and magazine	605	907	645	527		

WHAT STATE LABOR BUREAUS ARE DOING

Georgia

ACCORDING to the twelfth annual report of the Commissioner of Commerce and Labor of Georgia, there was a very large exodus of common labor from various sections of Georgia during 1923 despite the fact that the State Department of Commerce and Labor "made every effort possible to enforce the law with reference to emigrant agents." An amendment to this law was passed by the General Assembly making it obligatory for an emigrant agent to give a bond "conditioned upon the payment of any just debt owed by any person carried from the State." The commissioner reports he has refused licenses to emigrant agents unless they furnished such bonds, and as these agents refused to do so there are none now authorized to do business in that State.

For data on wages in various industries in 1923, taken from this report, see page 83 of this issue of the MONTHLY LABOR REVIEW.

Tennessee

THE working conditions of women in industry in Tennessee "are greatly improved," according to a report made by the chief factory inspector of that State, published in the Proceedings of the Twenty-eighth Annual Convention of the Tennessee Federation of Labor, held at Chattanooga May 5–7, 1924.

The greater number of woman wage earners in Tennessee are found in the cotton, hosiery, spinning, and knitting mills, where they work from 55 to 57 hours a week. In the overall factories women's hours are from 44 to 52 a week; in dry goods and department stores, 41 to 55; in candy factories, 55 to 57; in restaurants, 56 to 57, 7 days a week; and in laundries, 57.

The chief factory inspector thinks "that the hours of woman workers should be reduced from 57 to 48 or 54 hours per week." He expresses disapproval of some employers working their women in split tricks and declares that where the labor is split there should be two shifts of workers so that the women could be employed consecutively.

Washington [1]

THE division of industrial relations of the Washington State Department of Labor reports on the settlement of wage claims in 5 cities for the 18 months ending December 31, 1923, as follows:

WAGE CLAIMS ADJUSTED BY WASHINGTON LABOR DEPARTMENT FROM JULY 1, 1922, TO DECEMBER 31, 1923

Office	Total claims	Claims settled	Claims unsettled	Money collected	Money involved in unsettled claims	Daily average collection
Seattle	2,800	2,540	260	$165,193.42	$14,433.26	$348.83
Tacoma	841	661	180	40,251.01	11,240.23	87.54
Spokane	346	300	46	12,601.73	2,269.51	27.96
Everett	47	38	9	1,242.94	386.25	3.14
Bellingham	143	102	41	4,005.01	2,584.00	10.34
Total	4,177	3,641	536	223,294.11	30,913.25	

Statistics on wages of miners, women in industry, and fatal accidents in coal mines in the State of Washington are given on pages 84, 95, and 170 of this issue of the MONTHLY LABOR REVIEW.

Other States

OTHER data listed below relating to the activities of State labor offices are published in this issue of the MONTHLY LABOR REVIEW on the pages indicated.

Connecticut.—Recent employment statistics, page 125.

Illinois.—Recent employment statistics, page 127.

Iowa.—Recent employment statistics, pages 125 and 129.

Kentucky.—Factory inspection, page 197.

Maryland.—Recent employment statistics, page 130.

Massachusetts.—Recent employment statistics, page 130.

New York.—Recent employment statistics, page 131. Factory inspection, page 197.

Ohio.—Recent employment statistics, page 126.

Pennsylvania.—Industrial accidents, January to June, 1924, page 126. Recent compensation report, page 177.

Wisconsin.—Employment statistics, page 132. Recent compensation report, page 178.

[1] Washington. Department of Labor and Industries. Second report, July 1, 1922, to December 31, 1923. Olympia, 1924, p. 113.

PUBLICATIONS RELATING TO LABOR

Official—United States

GEORGIA.—Commissioner of Commerce and Labor. *Twelfth annual report for the fiscal year ending December 31, 1923. Atlanta, 1924. 70 pp.*

Data from this report are published on pages 83 and 199 of this issue of the MONTHLY LABOR REVIEW.

MASSACHUSETTS.—Department of Labor and Industries. *Annual report on the statistics of labor for the year ending November, 1923.* [*Boston, 1924?*] [*Various paging.*] *Public Document No. 15.*

This volume is composed of three parts which have already been published separately, viz, Part I. Thirteenth annual report on union scale of wages and hours of labor in Massachusetts, 1922 (Labor bulletin No. 138); Part II. Twenty-second annual directory of labor organizations in Massachusetts (Labor bulletin No. 139); and Part III. Statistics of labor organizations in Massachusetts, 1921 and 1922 (Labor bulletin No. 140).

SOUTH DAKOTA.—State Mine Inspector. *Thirty-third report for 18 months' period ended December 31, 1923. Lead, 1924. 40 pp.*

Includes production statistics and detailed data relating to accidents.

WASHINGTON.—Department of Labor and Industries. *Second report, July 1, 1922, to December 31, 1923. Olympia, 1924. 120 pp.*

Statistics from this report are published on pages 84 and 170 of this issue of the MONTHLY LABOR REVIEW.

WEST VIRGINIA.—Bureau of Labor. *Labor laws of West Virginia. Charleston, 1924. 176 pp.*

A compilation of all the West Virginia labor laws up to the close of the 1923 legislative session.

UNITED STATES.—Department of Agriculture. *Organization and development of a cooperative citrus-fruit marketing agency, by A. W. McKay and W. Mackenzie Stevens. Washington, 1924. 68 pp. Department Bulletin No. 1237.*

Description of the California Fruit Growers' Exchange, its history, development, and organization.

—— Department of Commerce. Bureau of the Census. *Farm tenancy in the United States. An analysis of the results of the 1920 census relative to farms, classified by tenure, supplemented by pertinent data from other sources, by E. A. Goldenweiser and Leon E. Truesdell. Washington, 1924. 247 pp. Census Monographs IV.*

—— Department of Labor. Bureau of Labor Statistics. *Time and labor costs in manufacturing 100 pairs of shoes, 1923. Washington, 1924. iii, 154 pp. Wages and hours of labor series, Bulletin No. 360.*

—— —— Children's Bureau. *Administration of child labor laws: Part 5—Standards applicable to the administration of employment certificate systems, by Helen Sumner Woodbury. Washington, 1924. vii, 227 pp. Bureau publication No. 133.*

A discussion based upon studies made by the Children's Bureau of methods of administering employment certificate systems in actual use in 15 States. "Upon this information is based the present report, which attempts to give, not a description of any one system or a summary of the various systems, but a practical analysis of the most important features of successful methods of enforc-

ing child labor laws, especially the essentials of an effective employment certificate system, the corner stone of all child labor law enforcement."

UNITED STATES.—Department of Labor. Women's Bureau. *Women in New Jersey industries: A study of wages and hours. Washington, 1924. v, 99 pp. Bulletin No. 37.*

Some of the findings of this report are given on pages 91 to 93 of this issue of the MONTHLY LABOR REVIEW.

—— National Conference on Outdoor Recreation. *Proceedings of national conference on outdoor recreation, held in Washington, May 22–24, 1924. Washington, 1924. iv, 244 pp. Senate Document No. 151.*

The conference was called at the request of the President for the purpose of formulating a national policy governing the work of State, municipal, and private agencies, and Federal bureaus which are concerned in the development and preservation of our recreational facilities. Among the subjects stressed at the conference was the importance of provision of recreational facilities for workers and their families. A resolution of the convention urged that industries and mercantile establishments provide for their workers "additional facilities for organized games," and support municipal recreation work.

—— President's Conference on Unemployment. Committee on Seasonal Operation in the Construction Industries. *Seasonal operation in the construction industries; the facts and remedies. Report and recommendations of a committee of the President's conference on unemployment. New York, McGraw-Hill Book Co. (Inc.), 1924. xxx, 213 pp.*

Some of the findings of this report will be given in the November issue of the MONTHLY LABOR REVIEW. A brief preliminary summary of the report, issued by the United States Department of Commerce, was noted in the MONTHLY LABOR REVIEW for September, 1924, page 222.

—— (PHILIPPINE ISLANDS).—Governor. *Annual report for the year ended December 31, 1922. Washington, 1924. 213 pp.*

The report of the Philippine Bureau of Labor, included in this report, covers labor inspection, interisland migration movement, strikes, claims, and complaints, labor accidents, employment agencies, and labor laws. During 1922 there were 24 strikes declared involving 14,956 employees and 1,193 establishments. Nineteen of the strikes were on the question of wages. There were 469 persons injured in industrial accidents during the year. Of this number 69 were fatally injured, 17 were permanently disabled, and 287 were temporarily incapacitated for work. Eleven bills relating to labor were submitted to the legislature for enactment, the most important of which was a bill prohibiting employers from forcing laborers to buy merchandise, commodities, etc., and forbidding the payment of wages by means of tokens or objects other than legal tender currency.

Official—Foreign Countries

CANADA.—Dominion Bureau of Statistics. Internal Trade Branch. *Prices and price indexes, 1913–1923. Ottawa, 1924. 128 pp.*

Deals primarily with wholesale prices in Canada during the years 1922 and 1923, and is the second report on prices and price indexes issued by the Dominion Bureau of Statistics. The weighted index number has now been completed back to 1913, which year has been taken as the base year. After reviewing the course of wholesale prices in 1923 in general and analyzing the prices movement by commodity groups in text and tabular form and by means of charts, the report gives tables showing the wholesale prices of the individual commodities in 1922 and 1923, by months. Tables of index numbers of wholesale prices for the years 1913 to 1923, classified according to chief component material, purpose, and origin follow. Retail prices in Canada (1913–1923) and wholesale and retail

prices in foreign countries are dealt with by the report in a secondary manner. An appendix describes the method used in weighting the Canadian index numbers.

CANADA (BRITISH COLUMBIA).—Department of Labor. *Annual report for the year ended December 31, 1923. Victoria, 1924. 78 pp.*

Weekly wage rates for 1923 from this report are published on page 84 of this issue of the MONTHLY LABOR REVIEW.

—— (ONTARIO).—Minimum Wage Board. *Third annual report, 1923. Toronto, 1924. 31 pp.*

A summary of this report is given on pages 88 and 89 of this issue of the MONTHLY LABOR REVIEW.

CEYLON.—Department of Census and Statistics. *Report on the Census of Ceylon, 1921. Colombo, 1924. vi, 126 pp. Volume I, Part II.*

Gives the statistics of population and occupation.

DENMARK.—Statistiske Departement. *Emneliste over den Danske Statistiske Litteratur i 1923. Copenhagen, 1924. 26 pp. Statistiske Meddelelser 4. Raekke, 70. Bind, 6. Haefte.*

Subject list of Danish statistical literature published in 1923.

—— —— *Statistisk Aarbog, 1924. Copenhagen, 1924. xxiii, 239 pp.*

Statistical yearbook for Denmark for 1924. Contains statistics on wages, retail prices, social insurance, etc.

FRANCE.—Ministère du Travail. Contrôle des assurances privées. *Recueil de documents sur les accidents du travail. Paris, 1924. 422 pp. No. 1: Lois, règlements et circulaires. (1924).*

A collection of laws, regulations, and circulars relating to labor accidents and workmen's compensation in France and its colonies.

GERMANY.—[Reichsarbeitsministerium.] Reichsarbeitsverwaltung. *Zahlenwerk über die Arbeiterverteilung in der deutschen Industrie, nach den Angaben der Gewerbeaufsichtsbeamten und der Bergbehörden Ende 1921. Berlin, 1924. 135 pp. 29. Sonderheft zum Reichsarbeitsblatt.*

During the last year the German Federal Employment Service (*Reichsarbeitsverwaltung*) has published a number of maps showing the geographic distribution of workers in the individual industry groups. The present bulletin shows this distribution in table form, by States, Provinces, and Government districts.

GREAT BRITAIN.—Mines Department. *Retail prices and qualities of household coal. London, 1924. 43 pp. Cmd. 2185.*

A continuation of an inquiry begun in March, 1924, by the Secretary for Mines to determine the causes and justification for the spread between the pithead price of coal and the retail price to the public. The first inquiry (see MONTHLY LABOR REVIEW, July, 1924, p. 270) gave details of a conference between the Secretary for Mines and the coal merchants' federation. The present report deals with a similar conference with the representatives of cooperative societies to obtain comparative data. The result of the conference seems to have been indicative, rather than conclusive.

—— —— Miners' Welfare Fund Committee. *First report of the committee appointed by the Board of Trade to allocate the fund, 1921–22. London, 1923. 26 pp.*

—— —— —— *Second report of the committee appointed by the Board of Trade to allocate the fund, 1923. London, 1924. 38 pp.*

These reports give an account of the distribution of the welfare fund established by the mining act of 1920, which is made up by a levy of 1 penny on every ton of coal mined each year. By the end of December, 1923, the amount paid into the fund from the penny levy and as interest on investments, was £2,284,758, and the amount authorized for expenditure on district welfare

schemes was £1,556,506. Seventy-one per cent of the total amount appropriated has been for recreation projects. The next most important group of plans are for some form of health work. These account for 28 per cent of the amount appropriated. The largest amount under this heading has been used for establishing convalescent homes, and the next for pithead baths. Additions to hospitals already in existence and district nursing and ambulance services have also been provided in some places. About 1 per cent of the total amount appropriated for district schemes has been used for educational purposes, lectures, scholarships, and the like. In addition to the amounts used for district schemes, appropriations are also made to aid research on a national basis into mining dangers, and measures of prevention and safety.

GREAT BRITAIN.—Mines Department. Safety in Mines Research Board. *First report, 1921–22. London, 1923. 35 pp.*

—— —— —— *Second annual report, 1923. London, 1924. 42 pp.*

These reports describe the organization of the board and outline the various divisions of its work but give little account of the results of its investigations and studies which are dealt with in separate reports.

—— Ministry of Health. *Fifth annual report, 1923–24. London, 1924. xii, 172 pp. Cmd. 2218.*

Reviews the work of the year concerning public health, local government and local finance, administration of the poor law, and national health insurance, and gives separately the report of the Welsh Board of Health. Some of the data concerning housing are given on pages 164 and 165 of this issue of the MONTHLY LABOR REVIEW.

—— Oversea Settlement Delegation to New Zealand. *Report, 1923. London, 1924. 48 pp. Cmd. 2167.*

Report of a committee sent to consider conditions affecting British migrants to New Zealand. In general, it was found that New Zealand is not anxious for any extensive or unselected immigration. There is room for certain selected classes, in restricted numbers, but others are not invited.

—— Registry of Friendly Societies. *Report of chief registrar for the year ending December 31, 1922. Part C.—Trade-unions. London, 1924. iii, 49 pp.*

Gives statistical data respecting the number of trade-unions, membership, income, expenditures, unions collecting contributions for expenditure on political objects, and the like. Both the number and the membership of registered unions showed a falling off during the year, the number sinking from 524 in 1921 to 514 in 1922, while the membership fell from 5,453,815 to 4,505,941. Income and expenditure likewise showed a marked reduction during the year, the only exception to this being the expenditures from the political fund, which rose from £160,285 in 1921 to £266,984 in 1922.

Some data are also given concerning associations of employers. These numbered 93 in 1922 against 97 in 1921.

INDIA (PUNJAB).—[Department of Industries and Land Records. Inspector of factories.] *Annual report on the working of the Indian factories act, 1911, in the Punjab, for the year 1923. Lahore, 1924. [Various paging.] Chart.*

During the year the factory inspection force had under their supervision 399 factories, employing 49,110 workers. A total of 406 accidents is reported, of which 9 were fatal, 34 serious, and 363 minor.

INTERNATIONAL LABOR OFFICE.—*Automatic couplings and the safety of railroad workers. Geneva, 1924. 62 pp. Studies and reports, Series F, Second Section (Safety), No. 1.*

This is a study of the safety aspect of the problem of automatic couplings to see how far the need for automatic couplings is supported by the facts as to

accidents occurring in countries not using them as compared with countries in which they are in use.

INTERNATIONAL LABOR OFFICE.—*Economic barometers. Geneva, 1924. 56 pp. Studies and reports, Series N (Statistics), No. 5.*

The question of economic crises are discussed in this report with the view to establishing economic barometers as a means of sustaining economic activity and thus stabilizing the labor market.

—— *European housing problems since the war. Geneva, 1924. xii, 484 pp. Studies and reports, Series G (Housing and welfare), No. 1.*

Contains a study of methods of meeting the housing shortage in 17 European countries, and a summary of the general situation. Every country has experienced a housing shortage, which in most cases is still existent, and each has adopted in greater or less degree three methods of dealing with it—protection of tenants by rent and tenancy legislation, by control of housing accommodation by requisitioning and rationing dwelling space, and by governmental measures to promote the building of houses.

Tenants were protected partly by restricting the right of landlords to raise rents and partly by limiting the right of eviction. Practically every State in Europe adopted measures of this kind. While the protection of tenants was admittedly necessary, the writers of the report consider that the measures adopted for this end have hindered the return to a normal basis. Rents, which usually form a material portion of the cost of living, have not been allowed to rise to their economic value. Just so far as the rents have been restricted, wage earners, seeking an adjustment of their wages to the new economic conditions, have been able to ignore that portion of their living expenses and the new scale of wages is based on fictitiously low rental values. This limitation of the wage renders it impossible for the worker to pay an economic rent and decreases the inducement to capital to build, thereby increasing the complexity of the problem.

The second method, control of housing accommodation by the Government, was of necessity adopted during the war in regions near the front, or where war workers had to be massed in localities where accommodation was insufficient. Apart from these special regions, the rationing of housing space was found principally in Germany, Austria, Czechoslovakia, and Russia. It was the most inconvenient and unpopular of all methods and was given up as soon as circumstances permitted.

Governmental measures to provide new housing have varied from subsidies given by the State to the creation of a legal compulsion upon certain well-to-do persons to build houses. Up to December, 1923, this latter measure had been adopted only by the Serb-Croat-Slovene Kingdom, in which it is said to have produced good results, but it was at that time under consideration in Hungary and Czechoslovakia also.

—— *Unemployment, 1920–1923. Geneva, 1924. 154 pp. Studies and reports, Series C (Unemployment), No. 8.*

This is a study of the unemployment crisis in the different countries during the years 1920 to 1923, "showing relationship between general changes in unemployment, as illustrated by the most reliable national statistics, and other important economic factors for which regular statistics were also available."

—— *Unemployment in its national and international aspects. Geneva, 1924. 227 pp. Studies and reports, Series C (Unemployment), No. 9.*

The proceedings of a three days' conference on unemployment held at the London School of Economics in March, 1924. Questions of international trade, financial factors, provision of work for the unemployed, unemployment insur-

ance, the relation of hours and wages to unemployment, and migration were among the subjects considered.

ITALY.—Ministero dell'Economia Nazionale. *Direzione Generale del Lavoro e della Previdenza Sociale. I conflitti del lavoro in Italia nel decennio 1914-1923 (dati statistici). Rome, 1924. 331 pp. Supplemento No. 38 al "Bollettino del Lavoro e della Previdenza Sociale."*

A bulletin of comparative statistics on labor disputes in Italy during the ten-year period 1914 to 1923, showing in detail the number of industrial and agricultural strikes and lockouts, strikers and locked-out workers, and working-days lost, by industry groups, months, geographical distribution, duration, causes, results, and organization directing the conflict.

JAPAN.—Direction de la Statistique Générale. *Résumé statistique de l'Empire du Japon. 38e année. Tokyo, 1924. ix, 181 pp.*

The Japan statistical yearbook for 1923 contains tables covering the number of industrial establishments, the number of employees, and wages and hours of labor for different periods between 1911 and the first half of 1922. More recent figures were not available in many cases owing to the earthquake in September, 1923.

NORWAY.—[Departementet for Sociale Saker.] Statistiske Centralbyrå. *Lönninger, 1923. Christiania, 1924. 6*, 31 pp. Norges Offisielle Statistikk. VII. 119.*

Report on wages in Norway in 1923 issued by the Central Statistical Bureau. A summary of this report taken from a consular report was published in the September, 1924, issue of the MONTHLY LABOR REVIEW (pp. 78, 79).

POLAND.—Office Central de Statistique. *Annuaire statistique de la République Polonaise. II Année, 1923. Warsaw, 1924. XVIII, 223 pp.*

The Polish statistical yearbook contains a section on social statistics covering the labor market, number of workers employed, employment offices, wages, strikes and lockouts, accidents, and sickness insurance. The data relate in most cases to the years 1922 and 1923.

SWEDEN.—Socialdepartementet. Statistiska Centralbyrån. *Statistisk Årsbok för Sverige. Elvte årgången, 1924. Stockholm, 1924. xiii, 302 pp.*

Statistical yearbook for Sweden for 1924. Contains statistics on labor disputes, collective agreements, wages, etc.

SWITZERLAND (BERN).—Statistisches Amt der Stadt Bern. *Die Wohnverhältnisse in der Stadt Bern nach den Ergebnissen der Wohnungszählung vom 1. Dezember 1920. [1923.] Bern, iv, 192 pp. Charts. Beiträge zur Statistik der Stadt Bern, Heft 6.*

This bulletin of the municipal statistical office of the city of Bern, Switzerland, based on a housing census taken on December 1, 1920, shows in a very detailed manner, the housing conditions in the city of Bern on that date.

UNION OF SOUTH AFRICA.—Office of Census and Statistics. *Official yearbook of the Union, and of Basutoland, Bechuanaland Protectorate, and Swaziland. Pretoria, 1924. xxvii, 1, 103 pp. No. 6, 1923. Illustrations, maps, charts.*

Contains detailed statistical information, mainly for the period 1910 to 1922. Among the subjects considered are "Labor and industrial conditions" and "Prices and variations in the cost of living."

Unofficial

ATKINS, WILLARD E., AND LASSWELL, HAROLD D. *Labor attitudes and problems. New York, Prentice-Hall (Inc.), 1924. xi, 520 pp.*

This is primarily a textbook for college students, having for its purpose a more intimate consideration of the worker in society than is afforded by many of the current works on labor problems. It is believed by the authors, however, that

from its method of approach to these problems it will adapt itself to the needs of various other student groups. There is a general survey of the composition and number of the working population and of the attitude of various groups such as the coal miners, iron and steel workers, farmers and agricultural laborers, migratory workers, unskilled women operatives, and the clothing workers. Other sections of the book deal with the position of workers under machine industry, standards of living, the struggle for status through organization, and the assertion of public interests through community action.

BEAUDEMOULIN, JEAN. *La loi de huit heures. Enquête sur son application et sur les loisirs de l'ouvrier. Paris, Librarie Dalloz, 1924. 275 pp.*

The text of the French eight-hour law of April 23, 1919 is given together with the regulations applying it to particular industries and the temporary and permanent exceptions allowed in the application of the law. The study of the utilization of the leisure time secured to the workers as a result of the shorter workday covers the experience in different sections of the country and in different industries. A bibliography is appended.

BEHRENS, E. BEDDINGTON. *The International Labor Office. (League of Nations.) A survey of certain problems of international administration. London, Leonard Parsons, 1924. 220 pp.*

The writer has analyzed the methods of procedure developed by the International Labor Office in dealing with labor problems from an international standpoint.

BROUGHTON, G. M. *Labor in Indian Industries. Oxford University Press, 1924. vi, 214 pp.*

A study of the progress of the industrial revolution in India, the sources from which industrial labor is secured, the extent of the demand for it, the conditions of employment, and of ameliorative measures undertaken by the State, the employers, the employees, and by social agencies. The author was adviser in the Labor Bureau of the Indian Government from July, 1920, to December, 1922, and the text is based largely on inquiries and observations made during that period.

COLORADO STATE FEDERATION OF LABOR. *Official proceedings of the twenty-ninth annual convention, Pueblo, June 2–5, 1924, and the third Biennial Labor Political Convention, June 6, 1924. 1924. 95 pp.*

A report on workers' education from these proceedings is published on page 183 of this issue of the MONTHLY LABOR REVIEW.

CONSERVATIVE LABOR (PSEUD.). *Trade recovery and the relief of unemployment. London, Heath Cranton (Ltd.), 1924. 88 pp.*

The writer discusses British economic conditions as affecting the interests of labor from the international and national points of view. In the first case trade recovery and the relief of unemployment are dealt with in relation to German reparations and the establishment of a stable currency in the different European countries, while in the second case the policies of free trade and protection are discussed in their relation to the internal life of the country.

EXPLOITATIONS AGRICOLES. *Recueil de documents relatifs à l'application de la lo- du 15 Décembre, 1922, sur les accidents du travail agricole. Paris, Berger Levrault, [1924]. 150 pp.*

A collection of documents relating to agricultural labor accidents. The text of various laws and decrees relating to industrial accidents enacted from 1898 to 1923 is included.

FITCH, JOHN A. *The causes of industrial unrest. New York, Harper & Bros., 1924. xiv, 424 pp.*

The reactions of the workers to the facts of industrial life which result in industrial unrest are chiefly interpreted by the writer from the most striking conditions

contributing to that unrest. The writer believes that it does not make much difference, as far as the psychological effects are concerned, whether or not the harshest forms of opposition are characteristic of employers as a whole, since the effect of these harsher methods is felt not only by the particular employees who experience them but by the entire working class. The primary purpose of the book, therefore, is "to show that, whether the activities of working people in the defense or in the extension of what they believe to be their rights are wise or unwise, they are not irrational." There is a list of reading references following each chapter.

GRIFFITTS, CHARLES H. *Fundamentals of vocational psychology. New York, The Macmillan Co., 1924. xiii, 372 pp.*

A textbook for the use of classes in vocational psychology in which the fundamental problems of a psychological nature with which both the employment manager and the vocational counselor have to deal are given consideration. General principles, methods, and technique have been emphasized rather than practical rules.

GUMPERT, FRITZ. *Die Bildungsbestrebungen der freien Gewerkschaften. Jena, Gustav Fischer, 1923. 150 pp. Abhandlungen des staatswissenschaftlichen Seminars zu Jena, Sechzehnter Band, Drittes Heft.*

A monograph on the educational activities of the German Free (social-democratic) Trade-Unions. After giving a brief historical sketch of the precursors of the modern trade-union movement in Germany the author describes in detail the educational work of the German Free Trade-Unions in training trade-union officers and functionaries, educating the rank and file of the membership (libraries, lectures, trade-union press, etc.), in maintaining vocational training schools, and finally in training trade-union members for membership in works councils. A brief bibliography concludes the volume.

HALLSWORTH, J. *Commercial employees and protective legislation. London, Labour Publishing Co. (Ltd.), 1924. 96 pp.*

Gives a brief résumé of legislation concerning shop employees, with a discussion of proposed legislation for their better protection in such matters as hours, health conditions, and the like.

HEYDON, J. K. *Wage-slavery. London, John Lane, The Bodley Head (Ltd.), 1924. 215 pp.*

The author, an Australian, attempts to define what the workingman actually wants and to show him the way to secure it.

JOHNSTON, G. A. *International social progress. The work of the International Labor Organization of the League of Nations. London, George Allen & Unwin (Ltd.), 1924. 263 pp.*

The introduction contains a general analysis of the conditions of social progress, after which an account is given of the work of the International Labor Organization during the four years it has been in existence, showing the contributions the organization has been able to make toward social reform.

KIDD, JAMES. *Unity in industry. London, John Murray, 1924. 160 pp.*

A program for the development of trade-unionism along lines which will identify it with the interests of industry. The writer believes that trade-unionism has suffered serious misdirection, with the result that its great possibilities have been obscured.

LASCELLES, E. C. P., and BULLOCK, S. S. *Dock labor and decasualization. London, P. S. King & Son (Ltd.), 1924. xi, 201 pp.*

The problem of underemployment among dock workers in England has again been brought to the attention of the public in that country through the national dock strike of February, 1924, and the agreement, in the settlement of the strike,

for an immediate joint inquiry into the application of a scheme of decasualization. With a view to aiding the solution of the problem the writer presents a survey of the situation at the present time, an examination of certain circumstances which have affected the industry since the war, and an account of recent experiments in reform.

LUCKIESH, MATTHEW. *Light and work. A discussion of quality and quantity of light in relation to effective vision and efficient work. New York, D. Van Nostrand Co., 1924. xvi, 296 pp. Illustrated.*

The writer discusses the relation of light to life, outdoors and indoors daylight, the various forms of artificial light, the cost of artificial light, illuminants, and color, the quality of light, fundamentals of vision, the effect of proper lighting on production, and the most effective means of securing satisfactory lighting conditions. An attempt is made to establish the best range of illumination intensity and also the best quality of light for effective work. The volume is intended for the use of "lighting specialists, employers, workers, and all others interested in lighting in relation to the safety, the efficiency, the production, and the happiness of mankind in the field of work."

MINING ASSOCIATION OF GREAT BRITAIN. *Historical Review of Coal Mining. London, Fleetway Press (Ltd.), [1924]. xv, 463 pp. Illustrated.*

A historical review of the coal-mining industry in Great Britain compiled for the Mining Association for the purpose of supplementing and elucidating the historical exhibit of models in the mining exhibition hall at the Wembley Exposition. The various chapters are contributed by mining experts and the last two contain an account of trade-union organization among the miners, by Frank Hodges, M. P., and a history of employers' organizations by W. A. Lee, secretary of the Mining Association of Great Britain. In the appendix the models and exhibits are described and illustrated.

NATIONAL INDUSTRIAL CONFERENCE BOARD. *The building situation. New York, 1924. vi, 31 pp. Special report No. 29.*

A brief summary of developments in the building industry, with particular reference to their bearing upon the housing situation. Emphasis is laid upon the need of organizing the industry so as to relate supply and demand more closely than is now done, and thereby doing away with the violent fluctuations in employment and output which have marked the past. This can be accomplished only on a basis of comprehensive information concerning the building needs and resources both of the country as a whole and of the particular locality.

SERVANTS OF INDIA SOCIETY. *All-India Trade-Union Bulletin. Bombay, Sandhurst Road, Girgaon, 1924. 4 pp. Vol. I, No. I.*

The first issue of a new monthly whose purpose is to serve primarily as a brief record of the trade-union movement in India, but it is planned to include also a monthly summary of events affecting Indian labor interests, to publish from time to time lists of the important trade-unions, with their officers, membership, and addresses, and to serve, as far as possible, as a bureau of information concerning the labor movement in India.

SHURICK, A. T. *The coal industry. Boston, Little, Brown, & Co., 1924. xx, 383 pp.*

The purpose of the writer has been to furnish an account of the coal industry, freed from the necessarily technical presentation of the reports of the United States Coal Commission, which will give a composite picture of the industry from the mine to the consumer's bin. It includes an account of the coal fields of the country, a description of early and modern mining methods, methods of coal distribution, and economic and sociological conditions. Various statistical tables are appended.